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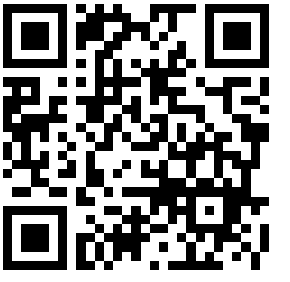

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THE JOVIAN

Volume Eleven DECEMBER, 1916 Number One

FLOOD LIGHTING THE STATUE OF LIBERTY

JUPITER DOHERTY HEADS LIST FOR A JOVIAN FUND

DEFINITE plans have been made to inaugurate the permanent flood lighting of the Statue of Liberty on Saturday night, December 2, that cover a program of national interest. President Wilson and a distinguished gathering of governors, cabinet officials, ambassadors and civic and industrial leaders will be in attendance. Secretary Daniels has assigned a fleet of battleships to participate in the ceremony, and New York City, through an official committee appointed by the mayor, is preparing to make the occasion a memorable one.

Owing to the limited time in which to have the work completed in order that the ceremony will mark the inauguration of "America's Electrical Week," a staff of engineers from Governor's Island and the General Electric Company were assigned the task of assembling the vast equipment necessary. The installation is under the direct supervision of W. D'Arcy Ryan, Po. 439, noted illuminating specialist, who installed the famous lighting system of the Panama Pacific Exposition.

A greater number of projectors will be used on the Statue than have heretofore been required to light any building or statue.

While the plan for flood lighting the Statue of Liberty has aroused a great deal of interest throughout the country, it has a particular significance to the electrical industry. It associates the industry's product, light, with patriotism, and identifies itself as Electricity's contribution to America's great symbol of freedom.

Consequently, when the switch is turned, on December 2, and the powerful flood lights flash upon the statue, a cheer will go up that will pulsate in the heart of every Jovian in the United States. To every one of us will come a mental picture of Miss Liberty spot-lighted on the stage of the world. There will be a great encore for the role she has played in the cast of liberty in the past, and the cheer will contain an expression of our faith in the wonderful place of enlightenment she is destined to occupy in the future. We will feel not a little pride in the knowledge that the electrical industry has made for her this tribute of light, this halo of human skill, from its craftsmanship.

The Statue of Liberty Lighting Fund is still below the sum required to defray the expense of installing the equipment. What would be more appropriate than a JOVIAN CONTRIBUTION to make up the deficit?

Jupiter Doherty has headed the list of the Jovian Fund with a subscription of $100.00, and the following members form the committee to handle it:

Henry L. Doherty, Po. 3208-33, Jupiter, care Henry L. Doherty & Company, 60 Wall street, New York, N. Y., chairman.

George Williams, Po. 6849, care Henry L. Doherty & Company, 60 Wall street, New York, N. Y.

C. W. Hobson, Po. 1, Past Jupiter One, care Hobson Electric Company, Dallas, Tex.

J. F. Killeen, Po. 5526, Fourteenth Mars, care General Electric Company, Pittsfield, Mass.

Homer E. Niesz, Po. 306V, Past Jupiter Thirteen, care Commonwealth Edison Company, Chicago, Ill.

Contributions should be sent to the office of Henry L. Doherty & Company, 60 Wall street, New York City, labeled "Jovian Statue Lighting Fund."

We suggest that a subscription list be started at every League and among the members in every city by some official action of the local fraternity.

This fund will identify the JOVIAN ORDER with the work of lighting the Statue, and each member should contribute a portion in accordance with what he feels he can give, whether it be twenty-five cents or more.

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

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Advertising rates on application.

FIFTEENTH JOVIAN CONGRESS

Henry L. Doherty, Po. 3208-33, Fifteenth Jupiter, New York, N. Y.

District 1—Edward F. Hail, Po. 1924, Houston, Texas.
District 2—P. S Klees, Po. 413, Hartford, Conn.
District 3—Jas. R. Pollock, Po. 18675, New York, N. Y.
District 4—William Gloeckner, Po. 2370V, Philadelphia, Pa.
District 5—W. J. Trott, Po. 2685, Grand Rapids, Mich.
District 6—C. D. Cabaniss, Po. 4453, Atlanta, Ga.
District 7—J. E. Cowles, Po. 1549, Shreveport, La.
District 8—W. A. Burckhard, Po. 1939, Norfolk, Va.
District 9—Martin J. Wolf, Po. 6027V, St. Louis, Mo.
District 10—E. W. Donoho, Po. 6049, Chicago, Ill.
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District 14—P. T. Davies, Po. 8818, Montreal, Can.
District 15—George L. Guy, Po. 4727, Winnipeg, Man.

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In charge of Central Offices.

PAST JUPITERS' ASSOCIATION, 1915-16.

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Past Jupiter One, Dallas, Tex.

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FRANK E. WATTS, Po. 1509-47
Past Jupiter Eleven, New York City.

W. N. MATTHEWS, Po. 496-44V
Past Jupiter Twelve, St. Louis, Mo.

HOMER E. NIESZ, Po. 306V
Past Jupiter Thirteen, Chicago, Ill.

THOS. A. WYNNE, Po. 11457V
Past Jupiter Fourteen, Indianapolis, Ind.

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A MESSAGE TO THE ORDER FROM REIGNING JUPITER DOHERTY

I AM not a bit insensible to the honor done me in electing me Jupiter and I hope I will be able to show my appreciation by trying to contribute in some way to the betterment of the Order. I am an organization man and I believe that all of us can do but little if we depend solely on our own efforts. It is the purpose of these organizations to make it possible for everybody to do his share. With the large membership that the Jovian Order now has and the possibility of a still larger membership, a little contribution on the part of everyone would do enormously towards furthering any work that we may undertake.

We are indeed fortunate to be in a line of business in which the harder we push the greater good is done for the country as a whole and the people of the country. I have one hobby. You know sometimes the simplest things are the hardest things for other people to comprehend. We all know that co-operation is a good thing, and yet there never was but one man in this country that capitalized co-operation for anything like its full value, and that was J. Pierpont Morgan. Regardless of how much talent he did have or did not have, the faundmental idea of his was to get together, get together, and the result was he made an enormous fortune, not only for himself but for many others. Co-operation was not a lip service with him.

This phrase, "Do it electrically," should not become a mere lip service, but the science of electricity has gone far, far ahead of the application of electricity. We can measure the progress of the world's civilization by the extent we have managed to reduce or eliminate human labor. There has been no one single factor which has been such a wonderful contribution to the elimination of human labor as the development of electricity. I want to get every man in the Jovian Order to thinking of this, that whenever you see a man, woman or child doing any form of human labor, don't forget that that can either be reduced or entirely eliminated if electricity is used as the agent. If you don't know how to do it put it up to somebody that does. Now, when we have got that idea thoroughly saturated in every member of the Jovian Order, then we want to saturate the general public with it. Now that all sounds very simple. We have all been saying, "Do it electrically," but that is just lip service compared with actually going out and applying it whenever we see anybody doing any form of human labor.

Men must work and men must play. The man is fortunate who can get his pleasure from his work, and the men who make a big success, as a rule, are men who get pleasure from their work, when the doing of their work is a pleasure.

Every Jovian, I think, should stand for a man who discharges his duties efficiently and well, a man who takes an interest in the entire Jovian Order, and his ideas should be based on the fact that in the development of electricity a pleasure and a good fellowship should go with it. I believe in play, but if I can make my play useful I want to make it useful, and I hope that if this esprit de corps can be created in the Jovian Order that no matter how high it is today that it will be still higher, that the fun and the pleasure in the Jovian Order will continue to increase, but that the dignity and the seriousness of the work of the Order will also increase and meet with the universal approbation and respect of the entire electrical fraternity.

* * * *

THE FOUNDATION OF JOVIANISM

BACK OF human achievements chronicled in the history of the human race will be found a spirit of unity and co-operation. The wonder of the Egyptian pyramids and the glories of King Solomon's Temple are tributes to ancient organizations. Within the past two years the German Empire has amazed the world by an exhibit of the application of its tenets. The fundamental principle of Jovianism is unity. Its application of the principle is to advance the wonderful power of electricity for the benefit of humanity.

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FOURTEENTH ANNUAL CONVENTION PROCEEDINGS

Serious Consideration of Jovian Affairs in Evidence

FROM the time the first member registered and received his credentials at the Indianapolis Convention it was apparent that an unusual amount of interest was centered in the questions to be considered concerning the Order's future. The proposed constitutional amendments embodying greater changes than had been considered at any previous Annual Meeting were the chief topics of discussion. This interest in the Order's welfare continued to evince itself throughout the entire meeting. Apparently the greater portion of the attendance were more deeply concerned in the work of providing the means to advance Jovianism than was in evidence at a number of its former conventions where the bulk of the labor was placed upon a few who were willing to perform it.

Registration and Opening Session

Registration of the local membership began at 1 o'clock Tuesday, 17, and lasted until 10 p. m.

The Convention proper opened with a session scheduled for 9 a. m., Wednesday, 18. Jupiter Thomas A. Wynne, Po. 1145V, called the assembly to order and made the formal opening address. He briefly reviewed the activities of the past year and recommended the adoption of the proposed changes in the constitution, expressing as his belief that they were essential to the progress that the fraternity looked forward to under the incoming administration.

J. M. WAKEMAN, Po. 524, Fifth Apollo, General Manager, Society for Electrical Development. His address, "Relation of the Society to the Jovian Order," clearly defined the value that would result from the co-operation of the two associations, and warmly advocated a unity of effort in movements for the general benefit of the electrical industry.

Chairman Installed—Address of Welcome

After his opening address Jupiter Wynne called upon Henry Harris, Po. 2888-48V, Fourteenth Pluto, of Wilmerding, Pa., to occupy the chair and preside during the Convention. This was the fifth Annual Meeting over which Mr. Harris has presided. The satisfactory manner in which he discharged the duties of the office was a matter frequently commented on during the meeting.

Joseph E. Bell, Po. 13467, mayor of Indianapolis, was then introduced and delivered a cordial address of welcome to the delegates and visitors. He was responded to by Henry W. Kiel, Po. 12312, mayor of St. Louis. Both addresses were in a light vein of humor that produced applause and laughter from the audience.

Committees

Announcement of the following committee appointments was made:

RESOLUTIONS—Charles A. Newning, Po. 2V, Past Jupiter Four, Houston, Texas; B. P. Oblinger, Po. 4851, Indianapolis, Ind.; W. R. Herstein, Po. 765V, Thirteenth Avrenim, Memphis, Tenn., John J. Cooper, Po. 1058, Fourteenth Atlas, Denver, Colo.; R. M. Van Vleet, Po. 1094, Eighth and Ninth Mercury, Milwaukee, Wis;

SECRETARY'S REPORT—Oscar C. Turner, Po. 333-3V. Past Jupiter Eight, Birmingham, Ala.; N. H. Boynton, Po. 5604V, Cleveland, Ohio; A. G. Pierce, Po. 2896, Pittsburgh, Pa.; Martin J. Wolf, Po. 6027V, Fifteenth Ajax, St. Louis, Mo.; A. C. Beattie, Po. 1823, Ninth Mars, Cincinnati, Ohio.

NOMINATIONS—Sam A. Hobson, Po. 3V, Past Jupiter Three, Chicago, Ill.; A. J. Binz, Po. 1921V, Thirteenth Neptune, Houston, Texas; James H. Betts, Po. 6765, Fourteenth Vulcan, New York; P. Lloyd Lewis, Po. 6018, Kansas City, Mo.; J. E. Ramier, Po. 10604, Fourteenth Avrenim, Memphis, Tenn.

JEWELRY—W. N. Matthews, Po. 496-44V, Past Jupiter Twelve, St. Louis, Mo.; F. E. Watts, Po. 1509-47, Past Jupiter Eleven, New York; W. R. Patton, Po. 1090, Fourteenth Argus, Milwaukee, Wis.; John F. Killeen, Po. 5526, Fourteenth Mars, Pittsfield, Mass.; Charles L. Martin, Po. 176V, Eleventh Vulcan, Dallas, Texas.

W. A. LAYMAN, Po. 1166, President, Wagner Electric Manufacturing Co. Since its delivery in the Convention Hall, his address, "Building a Career," has been read before Jovian Leagues throughout the United States and Canada. Making the devotion to some particular virtue the foundation, Jovian Layman drew from historic characters examples and wove an inspiring story in a masterful manner.

Credentials

—J. Robert Crouse, Po. 260-8V, Past Jupiter Seven, Cleveland, Ohio; Homer E. Niesz, Po. 306V, Past Jupiter Thirteen, Chicago, Ill.; J. M. Wakeman, Po. 524, Fifth Apollo, New York; T. H. Bibber, Po. 158V, Twelfth Pluto, St. Louis, Mo.; M. H. Moffett, Po. 2935V, Fourteenth Triton, Cleveland, Ohio.

Mercury's Report

With the adoption of the regular order of business the annual report of Mercury Ell C. Bennett, Po. 3932-13V, was presented. In connection with the report a large chart had been prepared showing the increase in membership from the time of the organization of the Order to the present. The chart showed the growth by years, the number of members added each year and the total membership at the close of each year.

A summary of membership from the inception of the Order to the present was also given as follows:

Total number of potentials issued		19,338
Deductions from all causes:		
Members address unknown	1,121	
Resignations	1,531	
Deceased	314	
Dropped	341	
Expelled	8	
Total deductions		3,315
Present membership		16,023

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Included in the list of deductions in this year's report are members of unknown address. This list has not been deducted from the report in previous years. By including this item the "present membership" as shown makes the total less than that of last year's report which gave the membership as 16,147. By either adding it to the present membership or deducting it from the net membership as given in last year's report the correct net gain for the year will be seen to be 1,003, or .0621 per cent.

Besides a report of the growth and condition of the Order, Mercury Bennett's statement contained recommendations for the constitutional changes which had previously been published, and a recommendation that a committee be appoined to make a thorough investigation of insurance for the members of the Order and report at the next Annual Meeting. There were also recommendations that committees on railroad "rate revision" on "terms and discounts" and on "civic co-operation" be appointed.

Wednesday Afternoon Session—Addresses

The afternoon session on Wednesday was devoted to addresses. Fred R. Jenkins, Po. 10932, secretary of the Chicago Central Station Institute, took for his theme, "Educational Courses of the National Electric Light Association." A. D. Curtis, Po. 12933, president, National X-Ray Reflector Company, Chicago, spoke on "Lighting Abroad and Commercial Supremacy." M. D. Cooper, Po. 8887, engineering department, National Lamp Works of General Electric Company, Cleveland, addressed the Convention on "Voltage Standardization," and George B. Muldaur, Po. 14687, traveling secretary, National Electric Light Association, New York, on "Co-operation with the National Electric Light Association."

GEORGE B. MULDAUR, Po. 14687, Traveling Secretary, National Electric Light Association, New York. His address, "Greetings from President Wagner of the N. E. L. A.," was an expression of feeling of harmony, and an allusion to the spirit of co-operation that exists between the two organizations.

Discussion of Amendments

Almost the entire day, Thursday 19, was devoted to discussion of the proposed constitutional amendments. The two principal speakers being A. M. Wilson, Po. 14357, of Cincinnati, and Martin J. Wolf, Po. 6027V, of St. Louis.

D. L. Gaskill, Po. 4499, secretary-treasurer, Greenville Light & Power Company, Greenville, Ohio, accepted the arduous task of reading the constitution, which, like everything else he undertakes, he preformed in an exceptionally satisfactory manner.

Owing to the inclement weather the automobile races scheduled to take place on the speedway in the afternoon had to be abandoned. The time set aside for that purpose was devoted to further discussions of the proposed changes of the constitution. Time was also allowed members to speak in favor of the candidates of their choice for the various offices of the Order. A limit of two minutes was placed on each speaker. About a dozen members took advantage of the opportunity to orate on the merits and qualifications of candidates.

Addresses Friday Morning

The Friday morning session was devoted to addresses. W. A. Layman, Po. 1166, president, Wagner Electric Manufacturing Company, of St. Louis, delivered an address on "Building a Career" that impressed the attendance so favorably, a resolution was adopted providing for its publication and distribution to the various Leagues to be read before each. J. M. Wakeman, Po. 524, Fifth Apollo, general manager for the Society for Electrical Development, New York, spoke on co-operation between the Jovian Order and the Society for Electrical Development. The great advantages of the two organizations, that are striving for practically the same ends, to achieve beneficial results for the industry by working in harmony was outlined and the prediction made that such co-operation would make the two orders the greatest trade influences in the country. H. W. Alexander, Po. 17191, director of publicity for the Society for Electrical Development, embodied in his address, "America's Electrical Week," statistics showing the vast amount of business still to be developed in the electrical field.

FRED R. JENKINS, Po. 10932, Secretary, Chicago Central Station Institute, Chicago, addressed the Convention on "Work of the Educational Committee of the N. E. L. A." He gave an outline of the courses of "Commercial Engineering," "Salesmanship" and "Advertising," and described their value and the success with which they were meeting.

Resolutions

Resloutions were then adopted extending thanks to Henry Harris, Po. 2888-28V, Fourteenth Pluto, for the uniform courtesy and impartiality with which he had discharged the duties of chairman; to Mayor Joseph E. Bell, Po. 13467, for his eloquent welcome to the city; to Retiring Jupiter Thomas A. Wynne, Po. 11457V, and his local committees, including the ladies' committee, whose untiring efforts had produced a splendid tribute to Jovianism; to the management of the Severin Hotel which received and entertained the whole Jovian body in an effective manner; to the Robbins & Myers Company for sending its fine band to enliven the Convention with music; to Hon. Henry W. Kiel, Po. 12312, Mayor of St. Louis, for his sacrifice to the Order in leaving his many responsibilities to attend.

Resolutions declaring that the meeting had been a most successful one, that members would leave Indianapolis and its hospitable people with recollections that would endure, that the addresses on special topics, delivered by distinguished speakers had been most entertaining and instructive, were adopted.

At the afternoon session, Thursday, a resolution of regret at the tragic death of W. Ward Hincher, Po. 17423, and his wife, who were killed by the overturning of their auto while enroute to the Convention, was adopted.

On Friday morning a resolution of regret and condolence, which

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embodied a eulogy of the life of J. Harry Pieper, Po. 11868, Fourteenth Comus, who died July 8, at Los Angeles, was passed.

Later a resolution was adopted extending thanks to the McGraw Publishing Company and the Society for Electrical Development, and an expression of appreciation to H. W. Alexander, Po. 17191, F. W. Feiker, Po. 17197, L. C. Spake, Po. 15397, and R. M. Wooley, for the work and expense of contributing a convention paper, "The Little Red Devil" which added much interest and amusement to the proceedings.

Talks by Prominent Jovians

Following the adoption of the resolutions, Past Jupiter Hobson announced that the Past Jupiters would entertain the Congressmen elect at a dinner at six o'clock at which Mr. Doherty would be guest of honor.

Chairman Harris then introduced George C. Rough, Po. 512V, Twelfth Hercules, who has been entertaining the fraternity for several years with witty Canadian dialect articles in The JOVIAN. Mr. Rough gave a reading of a paper he had prepared on "America's Electrical Week."

T. H. Bibber, Po. 158V, Twelfth Pluto, addressed the Convention on "What I Get For My Two Dollars" amid frequent applause and laughter.

Chairman Harris then announces that short addresses from the Past Jupiters of the Order would be appreciated. Those present who responded were J. Robert Crouse, Po. 260-8V, Past Jupiter Seven; Charles A. Newning, Po. 2V, Past Jupiter Four; Homer E. Niesz, Po. 306V, Past Jupiter Thirteen; W. N. Matthews, Po. 496-44V, Past Jupiter Twelve; Frank E. Watts, Po. 1509-47, Past Jupiter Eleven, and Sam A. Hobson, Po. 3V, Past Jupiter Three.

Mr. Doherty Arrives

As the ballot for officers was being taken, Henry L. Doherty, Po. 3208-33, entered the hall. He was given an enthusiastic ovation while being conducted to the speakers' table. As he arose to address the Convention the demonstration was even more vigorous, continuing until Chairman Harris rapped for order.

THE DEGREE TEAM PRIZE awarded to Chicago for the best portrayal of the Ritual

PRIZE-WINNING DEGREE TEAM

Chicago's Degree Team that won all prizes. Standing left to right: G. K. Severn, Po. 17560, Mercury; Otis L. Johnson, Po. 5633, Hercules; E. J. Reilly, Po. 17538, Neptune; R. R. Pilkington, Po. 18800, Coach; H. F. Neill, Po. 18792, Pluto; F. M. Cockrell, Po. 17356, Jupiter; C. W. Bontemps, Po. 19231, Mars; C. C. Weilding, Po. 17604, Vulcan; O. O. Jones, Po. 15368; D. M. Wood, Po. 17611, Apollo; C. E. Robinson, Po. 18808, Avrenim. Seated: C. N. Bridge, Po. 17330, Elmer Hansen, Po. 14153, and F. N. Tiltges, Po. 11023, Imps. H. E. Neill, Po. 18792, portraying the role of Pluto, was awarded the $100 jewel for the best individual performance.

Mr. Doherty's address, printed in this issue, was delivered in a clear and candid manner that made a decided impression on the members. Taken as a key-note to the course he expects to pursue to advance the Order during his administration, it was felt to have a wide significance covering a course of action that will promote greater unity and co-operation.

Balloting for Officers

Mercury announced that the ballot boxes would remain open for two hours in order to let members vote who were absent from the hall at that time.

Tellers

While the ballot was being taken the following tellers were appointed: L. C. Spake, Po. 15397, R. M. Van Vleet, Po. 1094, W. R. Patton, Po. 1090, H. W. Alexander, Po. 17191, F. E. Lauderbach, Po. 11655, Thomas F. Kelly, Po. 1953, J. M. Bateman, Po. 2610, A. J. Binz, Po. 1921, M. H. Moffett, Po. 2935, M. H. Jones, Po. 2928, R. E. Shaulin, Po. 2942, H. S. Greene, Po. 474-2, Fred Johnson, Po. 177-V, W. E. Bischoff, Po. 3190, Frederick H. Gurtler, Po. 3071, R. E. Russell, Po. 5561, H. C. Chappel, Po. 5609, W. S. Ferguson, Po. 18528, and W. R. Joyes, Po. 13813.

The results of the election as printed in the November issue of The JOVIAN, and which are included in the new list of Congressmen and Statesmen in this issue were announced from the stage of the German House in the evening.

Entertainment

A power over which the best laid plans have no control, namely the weather, wrought havoc with Indianapolis' plans to outdo the cities that had entertained the Jovian Conventions in past years. Neither effort nor expense had been spared, and probably nothing short of the unusual gyrations of J. Pluvius, who enlisted the aid of a flying squadron from the advanced guard of Old King Winter in his attack, could have prevented the city's purpose. It was with much regret that the outdoor features which included the auto races between noted drivers had to be abandoned. This event was

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scheduled to be one of the star entertainment features. Another that the local membership looked forward to with much pleasant anticipation was the sight-seeing trip about the city by auto. This, too, had to be abandoned. However, there were indoor entertainment features which were conducted successfully despite the inclement weather. They began with an informal reception and dance in the assembly room of the Hotel Severin at 8 o'clock on the evening of October 17. Wednesday evening was devoted to a tour of the city, and attending photo-play theatres. On Thursday the ladies spent part of the day in a shopping tour and there was a theatre party at Keith's Theatre in the evening.

Entertainment and Promotion Committees

The following chairmen were in charge of the various committees and deserve much praise for the effort and sacrifice they made to contribute to the success of the Convention:

Thomas A. Wynne, Po. 11457V, Fourteenth Jupiter, General Committee. Martin J. Wolf, Po. 6027V, Fifteenth Ajax, St. Louis, National Promotion and Publicity. Benjamin F. Lawrence, Po. 13531, Local Publicity and Promotion. George B. Rubins, Po. 12596, Entertainment and Decoration. Ell C. Bennett, Po. 3932-13V, Mercury, St. Louis, Registration. C. E. Roberts, Po. 3992, Evansville, Ind., Finance. A. H. Smith, Po. 13580, Auto Committee. R. Percival Oblinger, Po. 4851, Special Auto Committee. John W. Comeys, Po. 12508, Transportation. J. P. Case, Po. 12502, Printing and Badges. Governor Samuel L. Ralston, Po. 13564, Reception. Wallace O Lee, Po. 11440, Rejuvenation. N. A. Perry, Po. 114i47, Statesman for Ind ana. Charles E. Wehr, Po. 12671, First Tribune. B. F. Wampler, Po. 13594, Second Tribune.

Ladies' Committees

Mrs. Samuel A. Hobson, Chicago, Ladies' Promotion Committee.

Ladies' Reception Committee

Mrs. Thomas A. Wynne, Chairman. Mesdames George B. Rubins, Raymond Beechy, A. E. Bradshaw, Sol Meyer, F. H. Cheyne, Wm. Craig, R. F. Haddath, Samuel Ralston, T. B. Hatfield, Gerry Sanborn, Wallace O. Lee, Robert A. McGill, G. E. Varney, Aaron Wolfson, Hugh Harrison, S. H. Malpas, Frank P. Manley, John A. Morarity, R. P. Oblinger, J. H. Payne, N. A. Perry, H. E. Rassmussen, C. E. Roberts, J. C. Ruckelshaus, Garret C. Stutz, C. N. Thompson, Robert I. Todd, A. H. Smith and Harry Tutewiler.

J. ROBERT CROUSE, Po. 260-8V, Past Jupiter Seven, Chairman of the Committee on Credentials. He was active in the work of the convention and made an address on "Jovianism".

FIVE ACTIVE JOVIANS

An Annual Meeting would not seem natural without these Jovians in attendance. They were active on committees and on the floor at the Indianapolis Convention, rendering valuable service and diffusing the spirit of good-fellowship. Standing left to right: Oscar C. Turner, Po. 333-33V, Past Jupiter Eight; George C. Rough, Po. 512, Twelfth Hercules; Homer E. Niesz, Po. 306V, Past Jupiter Thirteen. Seated left to right: Sam A. Hobson, Po. 3V, Past Jupiter Three, and W. N. Matthews, Po. 496-44V, Past Jupiter Twelve.

Rejuvenation—Degree Team Contest

Beginning with the Rejuvenation at which eighty-two candidates were initiated at the Murat Theatre at 1 o'clock, until the close of the program of the "Night in Bohemia" at the German House, there was an abundance of amusement on Friday, the last day of the Convention. The Rejuvenation was followed by an entertainment program of stentors, which continued until the time set for the Degree Team contest. The latter resulted in the Chicago team carrying off the prizes both for team work and for individual performance. The judges awarded the custody of the cup and the individual prize to Chicago, and H. F. Neill, Po. 18792, of the Commonwealth Edison Company, Chicago, portraying the role of Pluto, on the winning team was awarded the $100 jewel for the best interpretation of a ritualistic part. The St. Louis Degree Team was judged second and the Kansas City team third.

"A Night in Bohemia"

In the program it was announced that the Entertainment Committee had concentrated a great part of its resources on the final entertainment feature, "A Night in Bohemia," to be held at the German House. From expressions gleaned during the affair, the opinion seemed unanimous that they had produced a feature that would vie for supremacy with the best the fraternity had ever enjoyed at its previous Annual Meetings. The German House possesses splendid facilities for accommodating large gatherings, There are two entertainment halls with stages and a large rathskellar with a cabaret stage. One hundred and twenty-five vaudeville performers had been engaged for the occassion, and performances were given on all three stages. Decorations in the form of head-gear, bangles, trinkets and false mustaches and whiskers were distributed to the guests. There were refreshments in abundance. The guests, and members who had worked faithfully to complete the task of shaping the Order's future, entered into the spirit of the occasion with a zest.

Election Results—Auto Drawing

A pause was called in the entertainment to allow Mercury Ell C. Bennett to announce the result of the election. Then followed the

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CHARTERED LEAGUES

Cincinnati has applied for Jovian Charter . . No. 1

Kansas City, Missouri, has applied for Jovian Charter . . . . . No. 2

Pittsburgh has applied for Jovian Charter . . No. 3

More Are Coming!!!
Details Later!!!

drawing to decide the automobile winners. D. E. Elmer, Po. 8660, of Richmond, Ind., won the first and Carson B. Harris, Po. 11527, of Indianapolis, the second.

Finis

After the auto drawing the festivities were renewed. The seats were removed from the floor of the large hall and dancing began. In the other hall and the rathskellar the vaudeville performances were started, and buffet supper was served, and "Mirth and Revelry were unrestrained."

When finally the gongs of the big clocks began to mark the passing hours with brevity, which big clocks have a persistent habit of doing at certain stages in the enjoyment features of life, the conviction that time has sped very rapidly prevailed over those inclined to tarry.

The moments unobserved on fleeting wings,
Along the trail of ages flit their way;
We sigh to see them go while laughter rings
But all our wishes fail their speed to stay.

The big crowd came down the steps. There was a buzz of electric starters, a whirr of motors, the lights in the German House were turned out, and the Fourteenth Annual Jovian Convention was over.

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INDIANAPOLIS PRESS

Among the many features of the Indianapolis Convention serving to emphasize the important position the Jovian Order has come to occupy in the minds of the general public as well as with the electrical industry, the generous treatment accorded by the local press is deserving of the commendation of the fraternity. The editorial and reportorial staffs of the three dailies entered into the spirit of the Convention in a real red-blooded manner that added greatly to the interest of the proceedings.

GEORGE A. RUBENS, Po. 12594, the man who handled the big Convention job. He was Chairman of the Entertainment Committee. Besides having an elaborate program he had the weather man against him, but he made good.

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Personal Pointers

S. H. Stover, Po. 4832, dealer in electric supplies, Pittsburgh, Pa., recently removed his office from 518 Empire building to 705 May street, Pittsburgh, Pa.

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W. R. Phipps, Po. 10676, general manager of the Brush Electric Company, Galveston, Tex., was recently elected a director of the Galveston Commercial Association.

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J. R. M. Gard, Po. 10121, dealer in electrical apparatus, Philadelphia, has moved from the Heed building at 1215 Filbert street to 201 North Thirteenth street in that city.

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H. F. Heyman, Po. 14294, formerly in the commercial department of the Toledo Railways & Light Company, Toledo, has been appointed manager of the Electric Company, Orrville, Ohio.

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Gail Reed, Po. 17533, recently general sales manager and advertising manager of the Walker Vehicle Company, became identified with the Anderson Electric Car Company, November 1.

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S. V. Alltmont, Po. 9177, formerly manager of the electrical department of the New Orleans Branch of the Johns-Manville Company, is now connected with the Interstate Electric Company, New Orleans.

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Walter H. Roth, Po. 18993, recently moved from Milwaukee, to Terre Haute, Ind., for the purpose of opening a sporting goods and electrical store at the latter place. He was connected with the Vim Stores Co. at Milwaukee.

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H. F. Jackson, Po. 7731, formerly vice-president and general manager of the Sierra & San Francisco Power Company, was elected president of the company at a recent meeting of the board of directors.

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C. R. Gill, Po. 9983, has been made superintendent of the Pacific Gas & Electric Company's Placer County District, with headquarters at Auburn, Cal. He was promoted from the position of superintendent of distribution.

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F. D. Fagan, Po. 1754, formerly sales manager of the Lamp Department of the General Electric at San Francisco, has recently been appointed district sales manager for the Pacific Coast division of the Edison Lamp Works.

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William Miller Tompkins, Po. 8168, until recently president of the Monitor Controller Company, has been appointed Philadelphia representative of the Ward-Leonard Electric Company, with headquarters at 4813 Haverford avenue.

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Robert Montgomery, Po. 6147, manager of the commercial department of the Louisville Gas & Electric Company, Louisville, served as chairman of the arrangement committee for Advertisers' Week held in Louisville, October 2 to 6.

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Charles H. Abbott, Po. 750, formerly representative for the Canadian Moloney Electric Company, Ltd., Toronto, Canada, is now associated with his uncle in the Abbott Ball Company, manufacturers of bearing balls, at Hartford, Conn.

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W. R. McGovern, Po. 17495, has been appointed chief engineer of the central group of the Bell Telephone Companies, succeeding James G. Wray, Po. 15406. Jovian McGovern was formerly state engineer for the Chicago Telephone Company.

CHAS. A. NEWNING, Po. 2V, Past Jupiter Four. Jovian Newning devoted much valuable space in his magazine, The Southwestern Electrician, to pre-Convention announcements. Besides being one of the originators of the Order he wrote its Ritual and has been active in promoting the fraternity's interest at all times.

John A. Britton, Po. 7380, vice-president and general manager, Pacific Gas & Electric Company, recently underwent an operation for appendicitis. At last reports he was getting along nicely and expected to resume his duties within a short time.

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Miles F. Steel, Po. 7054, has been appointed Pacific Coast manager of the Benjamin Electric Company. He succeeds F. H. Poss, Po. 994, who has held the position for the past ten years and was recently made sales manager of the company at Chicago.

* * * *

James G. Wray, Po. 15406, formerly chief engineer of the central group of the Bell Telephone Companies, recently resigned to affiliate with the firm of Hagenah & Erickson, public utility engineers, Chicago, who specialize in appraisals, cost analysis and rate revision.

* * * *

H. B. Kenney, Po. 9374, associated with S. E. Gamble and W. H. Early, has taken over the Appliance Manufacturing Company of San Francisco, and established a factory and offices at 561 Howard street, in that city. He was formerly with the H. M. Billesby Company.

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Chas. S. Harriman, Po. 18113, formerly with the Wagner Electric & Manufacturing Company at Kansas City, recently entered the employ of the O. H. Davidson Equipment Company, and has charge of the El Paso, Tex., office of that firm, with offices at 324 Mills building.

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E. A. WILCOX, Po. 6830, recently electric heating specialist for the Great Western Power Company at San Francisco, has been appointed manager of the Public Service Company, Tulsa, Okla. Jovian Wilcox is the author of an instructive book on electric heating, of recent publication.

* * * *

C. E. WEHR, Po. 12617, who has been connected with the Johns-Manville Company for the past fifteen years, at Indianapolis, resigned October 1, to represent a number of lines as manufacturer's agent. Jovian Wehr is senior partner in the new firm, called Wehr & Henry, located at 818 Hume-Mansur building, Indianapolis.

* * * *

J. D. A. CROSS, Po. 2222, was recently promoted to the position of general salesman of the General Electric Company, with headquarters at Pittsfield, Mass. His territory includes the entire United States. Jovian Cross has been a member of the company's sales organization in the Chicago district for the past ten years.

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WILLIAM S. KLINE, Po. 17462, was recently elected president of the Commonwealth Edison Company Section of the National Electric Light Association. Jovian Kline has been in the employ of the Commonwealth Edison Company of Chicago for the past fourteen years. He is at present assistant secretary of the company.

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PETER A. COGHLIN, Po. 8008, who has been associated with the Coghlin Electric Company, Worcester, Mass., for twenty years, recently severed his connection with that firm and has formed the Economy Electric Company, located at 30 Forster street, Worcester, Mass. Jovian Coghlin is president and treasurer of the new company.

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C. W. KELLOGG, Po. 345, recently appointed district manager for the Stone & Webster Company, Keokuk, Iowa, will have supervision over the Houghton County Electric Company, Dallas City Light Company, Fort Madison Electric Company, Keokuk Electric Company, Paducah Light & Power Company and the Mississippi River Power Company.

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GEORGE A. ELLIOTT, Po. 16620, who has been in the employ of The Electric Company, Milwaukee, for a number of years, recently accepted the position as sales manager for the Delco Lighting Systems at Sioux Falls, S. D. He was given a banquet on the eve of his departure from Milwaukee, at the Hotel Medford, by friends and associates.

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ARTHUR J. SWEET, Po. 6907, formerly a partner in the firm of Vaughn, Meyer & Sweet, has severed his connection with that firm and has opened offices in the Palace Theater building where he will engage in practice as general steam and electric consulting engineer, in addition to his specialty of illumination engineering.

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MAURICE E. BATES, Po. 16550, received the highest grade of those taking the electrical civil service examination at Kansas City recently. Jovian Bates, who was city electrician at Kansas City, resigned last spring following a change of administration. He will again resume the duties of the department.

PRIVATE L. S. MONTGOMERY, Po. 2711, Eleventh Apollo, with Troop I, First Cavalry, New York Division, State Guards, stationed at McAllen, Texas.

ROBERT W. ROLLINS, Po. 8085, president, Worcester Electric Light Company, was recently elected president of the New England Section of the National Electric Light Association. Besides holding executive positions in several electrical concerns, Jovian Rollins is actively connected with the various municipal and civic organizations in Worcester, his home city.

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OSCAR P. WODACK, Po. 17608, manager of the Chicago branch of the James Clark, Jr., Electric Company, has moved his office and salesrooms from 549 West Washington boulevard to 31 North Jefferson street. In addition to representing the James Clark, Jr., Electric Company, Jovian Wodack has organized a new company known as the Electric Tool & Maintenance Company, making a specialty of repairing electrical tools.

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CLOVIS M. CONVERSE, Po. 7808, formerly with the Electric Construction Company, Minneapolis, is now affiliated with J. W. Copeland, Po. 9139, and W. T. White, Po. 7374, in a manufacturer's agency. The general offices of the firm are at 1124 Metropolitan building. Jovian Converse will make his headquarters at their branch office, 420 Merchants Bank building, St. Paul. They at present represent The Cutter Company, Sangamo Electric Company, Central Tube Company, Industrial Controller Company, Pittsburgh Transformer Company and several other concerns.

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HERBERT A. WAGNER, Po. 10371, president, National Electric Light Association, was the guest of honor at a dinner at Sherry's, New York, given by Arthur Williams, Po. 1917, on the evening of October 13. The following guests were in attendance: Guy E. Tripp, Po. 143, Thomas E. Murray, Po. 11994, Walter Neumuller, Po. 5402, Frank W. Smith, W. F. Wells, Po. 1915, R. S. Orr, Po. 4634, Walter H. Johnson, Po. 14952, T. C. Martin, Chas. W. Price, Po. 423V, Edw. H. Johnson, James H. McGraw, Po. 9865V, Geo. W. Elliott, Po. 1897, Ray W. Lillibridge, Po. 5380, John W. Leib, Po. 11977, George F. Parker, Po. 2521, E. W. Lloyd, Douglas Burnett, Po. 1637, Martin J. Insull, H. M. Edwards, Po. 11935, Dudley Farrand, C. G. M. Thomas, H. C. Abell and Robert A. Carter, Po. 11916.

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GEORGE EVANS CULLINAN, Po. 2134, was recently promoted to the position of Western District manager of the Western Electric Company, that comprises the states of Missouri, Arkansas, Oklahoma, Kansas, Texas, New Mexico, Colorado, Utah, Wyoming and Idaho and parts of the states of Illinois, Tennessee, Mississippi and Louisiana. His headquarters will be at St. Louis. Jovian Cullinan has been identified with the Western Electric Company in various capacities since graduating from Williams College in 1901. He went to St. Louis as assistant manager of the company's branch at that point in 1907 and was promoted to the position of manager in 1909. He was Statesman for Missouri during the annual meeting held in St. Louis in 1914, which was one of the Order's most successful affairs.

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G. D. JONES, Po. 9371, has tendered his resignation as electrical engineer for the State of California, a position he has held for the past six years. He contemplates going into business for himself.

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STEWART WILDER, Po. 7068, vice-president and general manager of the Peekskill Lighting & Railroad Company, Mt. Vernon, N. Y., was recently elected president of the Empire State Gas & Electric Association.

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L. G. SHEPARD, Po. 18815, has left the Federal Sign System (Electric), Chicago, to accept a position as controller with the Milwaukee Western Fuel Company. His headquarters are at 14 Grand avenue, Milwaukee.

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WILLIAM L. ABBOTT, Po. 1224, of the Commonwealth Edison Company, Chicago, who is president of the board of trustees of the University of Illinois, was tendered a dinner by the alumni of the university at the Hotel LaSalle, November 4.

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CARL J. METZ, Po. 2115, until recently connected with the Central Union Telephone Company, Columbus, is now general wire chief for Companhie Telephonica Estado De Sao Paulo, Brazil. Jovian Metz was Statesman for Ohio during the Fourteenth Administration and rendered splendid service in promoting the interest of the Order in his State.

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OBITUARY

C. ALFRED LITTLEFIELD, Po. 11978, died at his home, 72 St. Nicholas avenue, New York City, on Monday, October 23. Jovian Littlefield, who was forty-nine years of age, having been born in Philadelphia in 1867, was the son of the late General Milton L. Littlefield. He was connected with the New York Edison Company for twenty-five years, and at the time of his death occupied the position of general agent for that company. He was a charter member of the Illuminating Engineering Society, and worked actively on its various committees. In 1914 he became general secretary of the society. He was also a member of the National District Heating Association, the Electric Vehicle Association of America, the National Electric Light Association, the American Museum of Safety, the Fifth Avenue Association of New York City, a director of the New York Edison Savings & Loan Association, and a member of many other civic and religious organizations. He is survived by his wife, Mrs. Evelyn Littlefield, to whom The JOVIAN extends the sympathy and condolences of the Order.

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GEORGE W. DEWEY, Po. 18392, died at his home in Scranton, Pa., on October 6. At the time of his death Jovian Dewey was connected with the sales department of the General Electric Company's Minneapolis office, where he had been employed for several years. He was in charge of the heating applicance sales department, and had many warm friends both among his business and social connections who were deeply grieved at his death.

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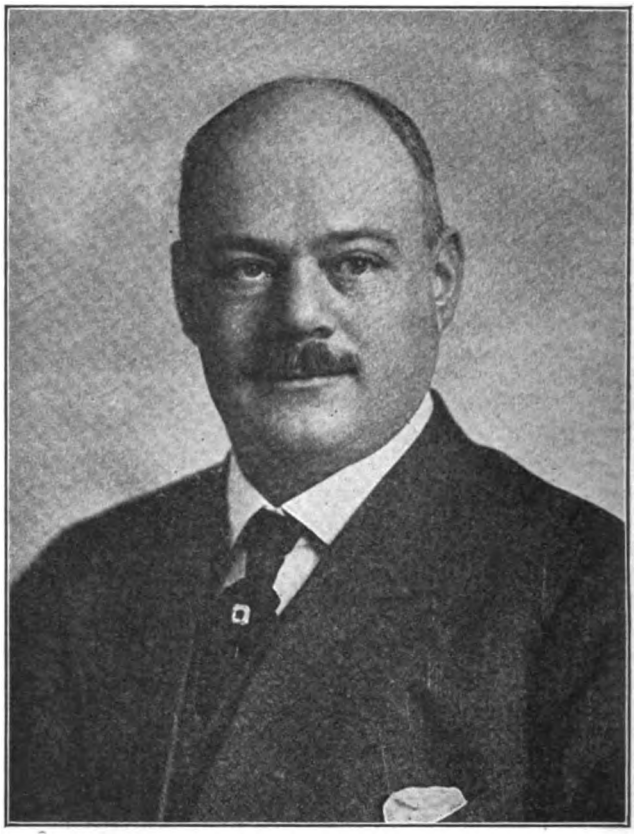
HARRY B. GATES, Po. 12529, died of apoplexy at his home, the Severn hotel, Indianapolis, Ind., October 11. Besides being president of the Severn hotel at Indianapolis and the Hotel Miami, Dayton, Ohio, he was the president of the Climax Coffee & Baking Powder Company, of which he was the founder. Jovian Gates was fifty-seven years old at the time of his death. He affiliated with the Order at the Rejuvenation held at Indianapolis, January 30, 1914, and took a great interest in the work of the Order. He was very much interested in the preparation for the Convention, which was to be held at his hotel, and looked forward with pleasant anticipation to entertaining the fraternity. The JOVIAN extends the sympathy and condolences of the Order to his son, A. Bennett Gates, Po. 19285, and other members of his family who survive him.



A. C. EINSTEIN, Po. 5760.

A. C. EINSTEIN, Po. 5760, vice-president and general manager of the Union Electric Light & Power Company, of St. Louis, died suddenly of heart trouble, at his home shortly after midnight on the morning of November 20. The death of Jovian Einstein is one sadly lamented by the entire St. Louis League, his many friends in the Order and electrical industry, and by the city in which he made his home and that has felt the result of his work and his charity. As an organization worker he ranked among the first; there has hardly been a time during the past few years when he was not actively engaged in promoting some civic movement for the benefit of his city, or some industrial movement for the benefit of the employes of his company. He took great interest in the operation of the St. Louis League, of which he served as president in 1913. Since then he has officiated on the executive committee and as chairman of its meetings on a number of occasions. He was fifty years old, and is survived by his wife and two children. The JOVIAN extends to them heartfelt sympathy and the condolences of the Order.

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A PRESIDENT'S CLUB FORMED AT KANSAS CITY

A movement that apparently has the approval of the various organizations of Kansas City was recently consummated in the formation of what is known as the "Presidents' Club." This organization is made up of the presidents of the various organizations of both industrial and civic bodies of the city. The new organization is expected to be the clearing house for new civic plans, and the board of strategy for co-operative team work in movements for the benefit of the city. There are about twenty-five organizations to be represented, and should the new plan be successful in welding them into a unit for the purpose of promoting the city's progress, it is felt that their influence will be of inestimable value. P. Lloyd Lewis, Po. 6018, president of the Kansas City Jovian League, will represent the electrical interests in the new club.

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NEWS OF JOVIAN LEAGUES

SANDUSKY, OHIO

The Sandusky League gave a banquet on the evening of October 9. The purpose was to get the merchants of the city interested in electrical goods together to formulate plans for "America's Electrical Week." About twenty-five local dealers were guests of the League.

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ROCHESTER, N. Y.

Both the meetings of October 19 and November 9, were devoted to the matter of improving the local organization. The luncheon of November 2, was devoted to the discussion of the subject of a new constitution.

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CLEVELAND, OHIO

Addresses by W. E. Robertson, Po. 424, Past Jupiter Six; W. R. Hirstein, Po. 765V, Thirteenth Avrenim, of Memphis, and E. R. Debevoise, National Electric Supply Jobbers' Association, New York, N. Y., were the features of the luncheon October 12. A League quartette and a mandolin club have been organized. Demand for membership is so great that it is felt there will soon be a long waiting list. The membership in the League was limited to 1250 at a recent meeting of the board of directors.

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LOS ANGELES, CAL.

Election of officers was held at Jahnke's October 21. The following officers were elected: A. E. Murphy, Po. 10758, president; K. E. Van Kuran, Po. 7062, first vice-president; Carl Young, Po. 10786, second vice-president, and Clifton Peters, Po. 12734, secretary-treasurer. W. L. Frost, Po. 14228, was chairman of the day. A. H. Halloran, Po. 1291, Twelfth Vulcan, addressed the meeting on "A Greater Jovianism." October 18 the League observed Edison Day. C. E. Spaulding, Po. 10775, was chairman. George P. Barton, former general patent attorney for Western Electric Company, Chicago, was the principal speaker and addressed the League on "Some Early Electric Patent Decisions."

Sam'l M. Ralston, Po. 13564, Governor of Indiana.

October 25 Mrs. Estelle Lawton Lindsay, member of the Los Angeles City Council, delivered an address on "The New Friendship Between Men and Women." H. E. Sherman, Jr., Po. 16072, officiated as chairman.

A. A. Schmidt and E. R. Wolcott, of the Western Precipitation Company, gave an illustrated lecture November 1 on "Commercial Use of Electricity as Applied to Precipitation." H. H. Fogwell, Po. 10732, was chairman of the occasion.

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NEW YORK CITY

October 11 the luncheon was held at Browne's Chop House. An address by Lieutenant John Lane, of the Seventy-First Regiment recently returned from the border, was the feature of the the occasion.

Henry L. Doherty, Po. 3208-33, was the guest of honor at a banquet given by the League on the evening of October 13, at the Hotel McAlpin. J. M. Wakeman, Po. 524, Fifth Apollo, was toastmaster for the occasion.

On October 18 General F. Elbert Davis, U. S. N., was the guest of honor at the luncheon.

Beginning with November 1, officers of the New York League decided to change the luncheons of the League from weekly to monthly. Hereafter they will be held on the first Wednesday of each month.

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COLUMBUS, OHIO

The Jovian Convention and "America's Electrical Week" were the subjects of discussion at the League luncheon September 29.

Final preparations were made to attend the Convention at the luncheon October 14.

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PHILADELPHIA, PA.

Dr. Charles P. Steinmetz, Honorary, addressed the League at its luncheon at the Hotel Adelphia October 19. The executive committee of the World's Salesmanship Congress were guests of the occasion.

November 9 the luncheon meeting was devoted to the election of officers for the ensuing year.

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MINNEAPOLIS, MINN.

An outline of the work done at the National Convention was given the League at its meeting of October 25 by E. M. Conant, Po. 16220, W. H. Vilett, Po. 3675, and O. A. Rofelty, Po. 7839.

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KANSAS CITY, MO.

The luncheon of October 27 was devoted to listening to the reports of the National Convention. The newly elected officers of the League, P. Lloyd Lewis, Po. 6018, president; A. Penn Denton, Po. 1415, Statesman for Missouri, vice-president, and L. E. Shoemaker, Po. 19190, secretary, appeared for the first time in their official capacity.

November 10 "Sales Reminiscences" was the theme of an address by J. P. Maguire, sales manager for Armour & Company, before the League at the luncheon at the Sexton Hotel.

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SAN FRANCISCO, CAL.

The luncheon meeting of October 11 was devoted to suggestions from the members for the good of the Order. Dr. J. H. Graves was the principal speaker at the luncheon of October 18. Walter K. Brown, manager, Crocker Wheeler Company, officiated as chairman.

An address by Rev. Paul Smith was the feature of the luncheon of October 25 at which Colonel H. V. Carter, Po. 858, was toastmaster.

"Health Insurance from an Employer's Viewpoint" was the title of an address made before the luncheon meeting November 1. Richard Francis Behan, Po. 9315, acted as chairman of the occasion.

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PITTSBURGH, PA.

The annual meeting of the League was held October 5, in the Dutch room of the Fort Pitt Hotel. Besides the regular routine of reports and election of officers, the report of the progress made was submitted by the committee on "America's Electrical Week."

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The following officers were elected for the ensuing year: President, W. L. De Coursey, Po. 7700; vice-president, W. T. Snyder, Po. 5128; treasurer, Ludwig Hommel, Po. 4336; Secretary, J. H. Van Aerman, Po. 14051.

On October 23, J. M. Wakeman, Po. 524, Fifth Apollo, general manager for the Society for Electrical Development, addressed the regular monthly meeting of the League.

At the luncheon November 2 Rev. A. A. Landing, pastor of St. James Church, Wilkensburg, Pa., was the principal speaker. His subject was "Historical Pittsburgh."

An exhibit of the original posters submitted in the Society for Electrical Development's contest was given at the Carnegie Institute of Technology November 6.

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CHICAGO, ILL.

October 12 was Columbus Day celebration, and the Chicago League was entertained by Vittotio Falorsi, professor of romance language of the University of Chicago.

At the luncheon on October 19, J. T. Mountain, Po. 13157, assistant to the chief operating engineer, Commonwealth Edison Company, gave an illustrated talk on "The Naval Training Cruise for Civilians."

Prof. George L. Scherger, Ph. D., teacher of history and politics of the Armour Institute, addressed the League on "American Ideals," at its luncheon October 26. P. L. Lucey, Attorney General of Illinois, was the principal speaker November 2. His subject was "Taxation and Progress."

At the luncheon November 9 Franklin H. Wentworth, of Boston, spoke on "After the War, What?"

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ST. LOUIS, MO.

At the luncheon October 24 J. P. Edwards, representing the City School Board, gave some interesting data in an address advocating the passage of an amendment authorizing the city to issue school bonds. A. L. Abbott, of the City Civic League, spoke on "The Non-partisan Ballot."

C. S. Butts, chief engineer for the Public Utilities Company, addressed the luncheon meeting October 31 on "The Transportation Problem." E. A. Chenery, Po. 928, was toastmaster of the occasion.

On November 7 W. A. Layman, Po. 1166V, president, Wagner Electric Company, re-read, by request, his address, "Building a Career," which he delivered at the Annual Convention. A. C. Einstein, Po. 5760, vice-president and general manager, Union Electric Company, officiated as toastmaster.

Arthur T. Morey, general manager, Commonwealth Steel Company, was toastmaster at the luncheon November 14. C. W. Price, field secretary for the National Safety Council, was the principal speaker and gave some intreesting facts concerning the "Safety Movement."

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A JOVIAN TOAST

From a Film Run at the Circle Theatre, Indianapolis, During the Convention

In Life's Great Power House may the Dynamo of Achievement ever turn smoothly for you—may you never have a short on the Circuit of Success—and on the Switchboard of Attainment may you never blow a fuse.

THOS. H. BIBBER, Po. 158V, Twelfth Pluto. His talk, "What I Get for My Two Dollars," was a revelation to even some of the most enthusiastic members at the convention.

LATE LEAGUE NEWS AND RECENT ELECTIONS OF LEAGUE OFFICERS

HARRISBURG, PA.

At the recent meeting of the Harrisburg League the following officers were elected: President, J. H. Musser, Po. 3379, president, Dauphin Electric Supplies Company; Vice-President, J. C. Thompson, Po. 18877, electrical engineer, United Electric Company & Valleys Railway; Secretary-Treasurer, C. P. Williams, Po. 18881, traffic supervisor, Bell Telephone Company.

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WICHITA, KAN.

The following officers were elected for the coming year by the Wichita League: President, C. R. Lewis, Po. 15815, general superintendent, Wichita Railway & Light Company; Vice-President, L. J. Blevins, Po. 15804, sales manager, Kansas Gas & Electric Company; Secretary-Treasurer, Homer S. Fox, Po. 17868, auditor, The Southwestern Electric Company.

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PITTSBURGH, PA.

At the annual meeting of the Pittsburgh League, the following officers were elected: President, W. L. DeCoursey, Po. 7700, district sales manager, Economy Fuse & Manufacturing Company; Vice-President, W. L. Snyder, National Tube Company; Secretary, J. H. Van Aernam, Po. 14051, commercial engineer, General Electric Company; Treasurer, Ludwig Hommel, Po. 4336, president, Ludwig Hommel & Company.

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LOUISVILLE, KY.

The Second Annual Electrical Exposition of the Louisville League will be held December 4 to 9, six days, afternoon and evening. Arrangements that have been made are superior in every way to those of last year. One of the main features will be Natiello's Royal Hussar Band. A number of high-class vaudeville acts have also been booked. An admission price of 10 cents will be charged, and it is expected about one hundred thousand people will attend. Last year the attendance was 54,000, although very inclement weather prevailed.

Coming Rejuvenations

December 4—Eau Claire, Wis. First Tribune, E. C. Dearth, Po. 17144, care Wisconsin-Minnesota Light & Power Company.

December 4—Des Moines, Iowa. Statesman, N. W. Lovegrove, Po. 5648, care Brilliant Electric Company, 408 Citizens National Bank building.

December 5—Newark, N. J. First Tribune, E. A. Sims, Po. 5968, care Avery-Loeb Electric Company.

December 6—Indianapolis, Ind. First Tribune, W. O. Lee, Po. 11440, care Indianapolis Light, Heat & Power Company.

December 9—Wichita, Kan. First Tribune, L. J. Harvey, Po. 6546, care General Electric Company, 945 Emporia street.

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The Return Circuit

Edited by W. R. Joyes, Po. 13813.

Befo' an' After

By W. R. J.

It sho' am berry sad to see de change
dat come about
When 'lection day is over an' de joy talk
done run out.
Dar jes' am no accountin' for de way dem
fello's act—
Ob course Ah knows de ones dat los' am
trubbled—dat's a fact!
But dey ain't jes' de only ones dat take
to actin' queer;
De ones dat win am most as quick to lose
dey line o' cheer.
You meets dem on de street befo' de
'lection comes aroun';
Dey shake yo' han' an' rub yo' mule an'
even pet yo' houn'.
It's "Howdy Uncle Samuel, you sho' am
lookin' fine!
Remembah dat big fish we caught way
back in eighty nine?
An' how is Aunt Samanthy, an' how am de
other folks?"
An' den dey make you split yo' sides
by tellin' funny jokes.
Dey make you feel dat you am mos' de
bigges' man in town;
But when de 'lection's over all yo' pride
comes tumblin' down.
You meet dem on de road an' street dere
heads up in de air,
An' dey don't even look aroun' to see
if you is dere.
As soon as dey's elected dey start out
to cut a splash.
Dey sho' fo'gets de nigger an' de po'
white trash!

* * * *

Campaign Back-Fire

DID YOU EVER NOTICE THAT

All candidates "rest" confident of victory the day before?

* * * *

There are not so many people striving to save the nation after the election is over?

Campaign committees never have any trouble in finding a safe majority to predict?

* * * *

The man with nine sons (daughters now included in some states) all solid for one candidate gets into the lime-light at some stage of the campaign?

* * * *

The man who gets red in the face trying to convince you how wrong you are, usually convinces you he doesn't know much about it himself?

* * * *

The partisan press wreathes halos for its party's candidates that would become a saint, and horns for the other party's candidates that would make Satan afraid of himself?

Arguments of the dyed-in-the-wool Democrat and the dyed-in-the-wool Republican get the independent voter to guessing which party is the worse rather than which party is the best?

* * * *

Truth, logic, philosophy, honor and principle get so badly juggled with falsehood, sophistry, trickery and dishonor that the common people have a hard time determining which side to be on, or what difference it makes?

* * * *

Subconsciousness

By W. R. J.

Subconsiousness is now the thing that puts us on the blink,
Our medical practitioners are so inclined to think.
They tell us that this wicked thing is gnawing at our health,
And if you can but spy it out the imp will chase itself.
It seems this dark and ugly sprite attaches to your soul,
And burrows very deeply in and covers up the hole.
It lies so very still and quiet you soon forget it's there,
And after while it sets to work your system to impair.
The remedy is plain enough. When you begin to ail,
Dust off your memory a bit and start it on the trail,
Of any kind of passion you subdued and chucked away,
That might have hid around some place and crept into the hay,
Until the time was opportune when it could submarine,
Your system with a shot or two without its being seen.
In Sherlocking the realms of past for anger or desire.
Remember disappointment for the things that you aspire.
Also inform your sleuth to watch for every point and place
Where you was jealous or in doubt or even felt disgrace.
If you have ever suffered from some act of violence,
X-ray the bump and if it's there the light will chase it hence.
According to the theory, if you should have the gout,
It does not come from what you ate but what you did without.
The trouble was you had the coin to buy much more to eat
Than you could hold, which made you sad, and later swelled your feet.
If you go blind it sure will be from things you could not see.
If you are deaf 'tis just because of some lost melody.
No telling what this imp will do, nor what will make it sore
And lots of us were not aware he hung around before.

* * * *

Floor-Walker

By W. R. J.

'Twas morning and the office clock
was indicating nine
When Jones came shuffling in to work
although the day was fine.
The boss observed the time of day and
also plainly saw
That something in his peace of mind
had ripped an awful flaw.
Said he (the boss), "You seem depressed,
what trouble ails you now?"
Said Jones, "I'm sleepy," and the sweat
stood out upon his brow.
"I understand Napoleon could keep
himself awake
For three whole days and three whole
nights without a single quake;
'Tis said that Mister Edison can do
with forty winks
While every one gives credence to the
slightest thought he thinks.
I've read of other records that would
give a man the creeps,
But I've a baby in my home whose father
NEVER sleeps!"

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MEMBERS WHOSE ADDRESSES ENLIVENED CONVENTION

A. D. CURTIS, Po. 12933, President, National X-Ray Reflector Co., Chicago, who made an instructive address on "Electrical and Illuminating Practices Abroad and Commercial Supremacy."

A. M. WILSON, Po. 14357, First Tribune, Cincinnati, Professor, Electrical Engineering Department, University of Cincinnati, who was prominent in amendment discussions. He was elected Statesman for Ohio.

HARRY W. ALEXANDER, Po. 17191, Publicity Manager, Society for Electrical Development, New York City. In addition to his address, "America's Electrical Week," he aided in getting out "The Little Red Devil," a paper that enlivened the meeting

M. D. COOPER, Po. 8887, Engineering Department National Lamp Works, General Electric Company, Cleveland, whose address, "Voltage Standardization," contained much valuable information on the subject.

MARTIN J. WOLF, Po. 6027V, Statesman at Large, Sales Manager, W. N. Matthews & Bro. St. Louis, who actively advocated the adoption of the amendments to the Constitution. He was elected Congressman for the Ninth District.

D. L. GASKILL, Po. 4499, of Greenville, Ohio, Secretary, Ohio Light Association. The lot of reading the Constitution fell to him and he performed it in a manner that brought much applause.

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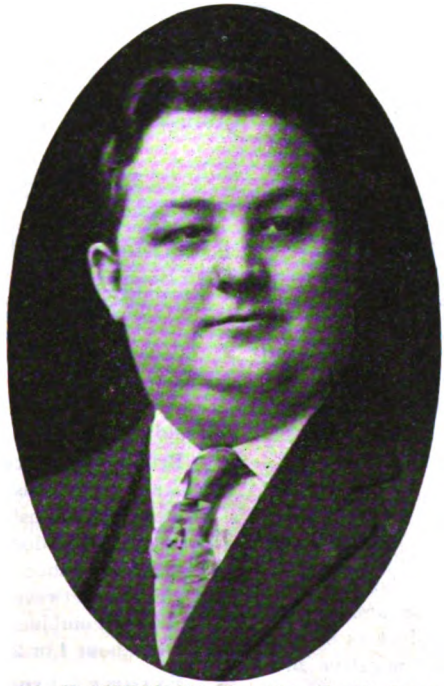
MEMBERS WHO OPENED THE CONVENTION AND THOSE IN CHARGE

HENRY W. KIEL, Po. 12312, Mayor of the City of St. Louis, whose response to Mayor Bell's address of welcome was a tribute both to the good-fellowship and the propriety of Jovians.

ELL C. BENNETT, Po. 3932-13V, Mercury.

THOMAS A. WYNNE, Po. 11457V, Fourteenth Jupiter. Past Jupiter Wynne contributed much time and effort towards making the Convention a success.

JOSEPH E. BELL, Po. 13467, Mayor of Indianapolis. His cordial address of welcome was highly appreciated by the Convention attendance.



H. H. CUDMORE, Po. 196, Tenth Mars, Sergeant-at-Arms. Back of Jovian Cudmore's disposition which radiates good-fellowship, there is a preparedness that gives weight to his authority.

HENRY HARRIS, Po. 2888-48V, Fourteenth Pluto, who as Chairman of the Annual Convention for the fifth time was the subject of much favorable comment for the able manner in which he discharged the duties of the office.

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Practical Lessons in Electricity

LESSON TWENTY

VOLTAGES, RATINGS, AND EFFICIENCIES OF DIRECT-CURRENT GENERATORS

By TERRELL CROFT

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TO COMPUTE the voltage induced in the armature of a bipolar direct-current generator, the formula (2) below can be used. This is the formula for the computation of the e.m.f. induced in any rotating coil, modified to specifically adapt it to the conditions of the armature of a bipolar machine. The formula for any rotating coil is:—

$$(1) \qquad E = \frac{\Phi_T \times C \times T}{100{,}000{,}000 \times 60} \quad (volts)$$

But in the new formula, let Φ_P = flux per pole. Also let C_T = the total number of inductors or sides of coils on the armature. Obviously, in a two-pole machine $\Phi_T = 2\,\Phi_P$. And, in a two-pole machine the inductors per pole, $C = C_T \div 2$. Then substituting these new symbols in the above equation:—

$$(2) \quad E = \frac{2\Phi_P \times C_T \times T}{100{,}000{,}000 \times 2 \times 60} = \frac{\Phi_P \times C_T \times T}{100{,}000{,}000 \times 60} \quad (volts)$$

Wherein:—E = average e.m.f. induced in the armature of any direct-curent bipolar generator. Φ_P = total useful flux, of linese of force per pole. C_T = total number of inductors or sides of coils on the armature; in drum armatures C_T is equal to twice the number of loops. T = number of revolutions per m'nute

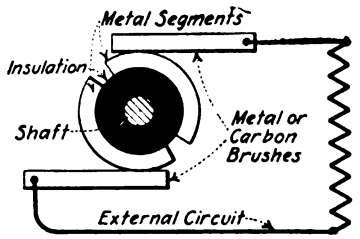

Fig. 1—Sectional View of Two-Segment Commutator

EXAMPLE.—What average e.m.f. would be induced in the loop of Fig. 1, if it were rotated at the rate of 1800 revolutions per minute and the flux per pole was 400 kilolines, that is, 400,000 lines? SOLUTION.—Obviously, the total number of inductors in 2. Now substituting in the formula:—

$$(3) \quad E = \frac{\Phi_P \times C_T \times T}{10^8 \times 60} = \frac{400{,}000 \times 2 \times 1800}{100{,}000{,}000 \times 60} = 0.24\ volts$$

EXAMPLE.—The armature of a bipolar generator has 104 loops on its armature and the flux per pole is 2,270,000 lines. What e.m.f. will be induced in its armature if it is driven at the rate of 1500 r. p. m.? SOLUTION.—If the number of loops is 104, the number of inductors is $104 \times 2 = 208$. Now, substitute in the formula:—

$$(4) \quad E = \frac{\Phi_P \times C_T \times T}{10^8 \times 60} = \frac{2{,}270{,}000 \times 208 \times 1500}{100{,}000{,}000 \times 60} = 118\ volts$$

To compute the e.m.f. induced in any direct-current generator armature, the following formula can be used:—

$$(5) \qquad E = \frac{P \times \Phi_P \times C_T \times T}{10^8 \times 60 \times m} \quad (volts)$$

Wherein.—The symbols have the same meanings as before, except:—P = the number of field poles. m = the number of parallel conducting paths between the positive and negative brush sets; that is, $C_T \div m$ is the number of inductors or armature conductors in series between positive and negative brush sets.

EXAMPLE.—A four-pole lap-wound armature has 200 inductors. The flux per pole is 3,000,000 lines. It is rotated at the rate of 1200 r. p. m. What e.m.f. is induced in it? SOLUTION.—In a lap-wound armature there are as many conducting paths as poles. Substitute in the formula:—

$$(5A) \quad E = \frac{P \times \Phi_P \times C_T \times T}{10^8 \times 60 \times m} = \frac{4 \times 3{,}000{,}000 \times 200 \times 1200}{100{,}000{,}000 \times 60 \times 4} = 120\ volts$$

EXAMPLE.—The armature of a four-pole generator has a wave winding and comprises 200 inductors. It is rotated at a speed of 1200 r. p. m. in a field of 3,000,000 lines per pole. What e.m.f. is induced in this armature? SOLUTION.—There are always two conducting paths through a wave winding. Substituting in the formula:—

$$(6) \quad E = \frac{P \times \Phi_P \times C_T \times T}{10^8 \times 60 \times m} = \frac{4 \times 3{,}000{,}000 \times 200 \times 1200}{100{,}000{,}000 \times 60 \times 2} = 240\ volts$$

Note that the e.m.f. with this wave, or two-circuit-series winding, is twice that of the similar generator of the preceding example with the lap winding.

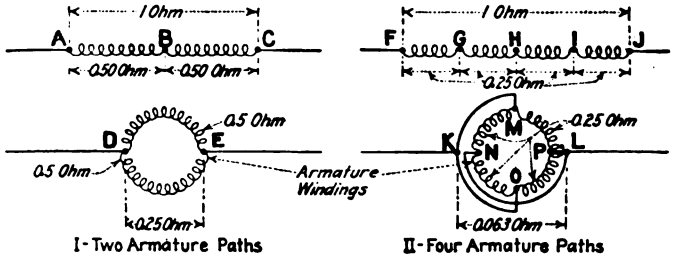

Fig. 2—Illustrating the Term "Armature Resistance"

Armature resistance is the resistance of an armature as measured between brushes of opposite polarity. The *brush contact resistance* is not included in "armature resistance." The conductors of an armature constitute a divided circuit as shown in Fig. 2. Hence, the resistance of an armature may be computed by treating it as a divided circuit. In an armature for a two-pole generator there are two paths in parallel. In the armature of a four-pole generator (lap winding only) there are four paths in parallel, and so on.

EXAMPLE.—If a coil of wire AC (Fig. 2—I) having a resistance of 1 ohm is formed into a winding on a bipolar-machine armature, the resistance of each of the two paths will be:—$1 \div 2 = 0.5$ *ohm*. Then, the resistance of these two paths in parallel—there are two paths in parallel in a bipolar machine armature—would be:—$0.5 \div 2 = 0.25$ *ohm*. Hence the armature resistance of this armature is 0.25 *ohm*. Similarly if this 1-ohm coil is formed into the winding of a four-pole machine armature as at II, the "armature resistance" from the positive-brush terminal, K, to negative-brush terminal, L, would be 0.063 ohm.

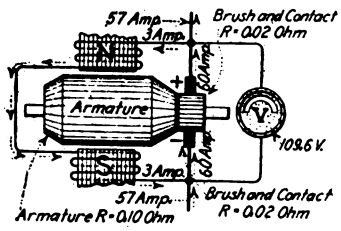

Fig. 3—Effect of Armature Resistance on Terminal E.M.F.

EXAMPLE.—If the "armature resistance" of a four-pole generator is 0.20 ohms, what would be the resistance of the conductor comprising it if it were in one continuous length (like FJ, Fig. 2—II)? SOLUTION.—Since there are four paths in parallel, each section of conductor constituting one of these paths must have a resistance of:—$0.20 \times 4 = 0.80$ ohm. Then, these four sections in series would have a resistance of:—$0.80 \times 4 = 3.2$ ohm.

Brush resistance and brush-contact resistance are always present. The brush resistance is the resistance of the brush itself, and obviously, varies with the volume and shape of the brush, just as does the resistance of any conductor. Brush-contact resistance is the resistance which occurs at the plane of contact between brush and segment. The drop in voltage, due to the combined effect of brush and brush-contact resistance may be about 1 or 2 volts in average machines under normal load.

EXAMPLE.—Experience indicates that the brush resistance and brush-contact resistance combined will vary from about 0.2 ohm to 0.4 ohm per square inch of brush contact. The resistance varies wth the current density through the brush and contact and with the circumferential speed of the commutator.

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The brush e.m.f. of a generator is the e.m.f. that the machine impresses on its brushes, as distinguished from the e.m.f. induced in the armature, which is the armature e.m.f. The brush e.m.f. may differ from the armature e.m.f. due to the IR drop in the armature winding. When the generator is not carrying load, the brush e.m.f. and the armature e.m.f. will be practically the same. The terminal e.m.f. is that which the machine impresses on the line. In a shunt-wound generator, the brush e.m.f. is the same as the terminal e.m.f. In compound and series-wound machines, the terminal e.m.f. will (when the machine is carrying load) be slightly lower, at any instant than the brush e.m.f., because of the IR drop in the series windings.

The e.m.f. impressed on an external circuit by a generator, that is, the terminal e.m.f., is the same as that induced *only when there is no current in the armature*, that is, only when all external paths from the brushes are open. When there is a current in the armature there will always be an internal IR drop in voltage in it. The drop is due to the armature resistance and the brush and the brush-contact resistances. Numerically this internal drop in volts will be equal to (*current in amperes*) × (*ohms armature resistance + ohms brush and brush contact resistance*). The e.m.f. impressed on the line will be smaller than the induced e.m.f. by the amount of this IR drop.

EXAMPLE.—Assume the armature of Fig. 3 to be that of the 1500 r. p. m. bipolar generator above. Then the em.f. induced by the armature is 118 volts. If the armature resistance is 0.1 ohm, and the brush and contact resistance for each brush is 0.02 *ohm*, what will be the terminal e.m.f. with a current of 60 amp. in the armature? SOLUTION.—The drop in the armature will be:—0.1 *ohm* × 60 *amp.* = 6.0 *volts*. The drop due to brush and contact resistance will be:—*2* × *0.02 ohms* × *60 amp.* = *2.4 volts*. Then the total drop is:—*6.0 volts* — *2.4 volts* = *8.4 volts*. Hence the terminal voltage at this load will be:—118 *volts* — 8.4 *volts* = 109.6 *volts*.

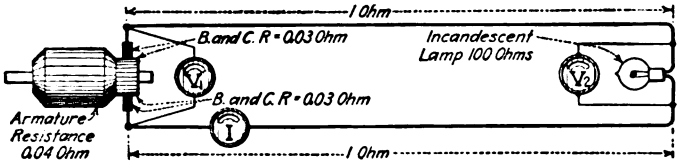

Fig. 4—Illustrating How the Resistance in Circuit Determines the Armature Current

The resistance of the entire circuit through which its e.m.f. impels current determines the current in an armature. This follows from Ohm's law. The e.m.f. induced in the armature forces the current to circulate. The resistance determines the rate of flow or amperes. Consider an example:—

EXAMPLE.—The armature of Fig. 4 is inducing an e.m.f. of 125 volts. It is impelling a current through a circuit comprising the following components:—(*1*) armature winding, 0.04 ohm; (*2*) two brushes and contact surfaces, 0.03 ohms each; (*3*) two line wires, 1 ohm each; (*4*) incandescent lamp, 100 ohms. What is the current in the circuit? SOLUTION.—The total resistance in circuit is:—

Armature	0.04 ohm
Two brushes at 0.03 ohms each	0.06 ohm
Two line wires at 1 ohm each	2.00 ohm
One incandescent lamp	100.00 ohm
Total resistance in circuit	102.10 ohm

Then applying Ohm's law:—$I = E \div R$ = 125 *volts* ÷ 102.1 *ohm* = 1.22 *amp.*, which is the current, *I*, in the armature, line wires and lamp.

EXAMPLE.—The voltage at V_1, or the terminal voltage in the above problem, would be the induced e.m.f. less the armature and brush resistance IR drops, or:—125 *volts* — (1.22 *amp.* × (0.04 *ohm* + 0.06 *ohm*) = 125 *volts* — 0.12 *volts* = 124.88 *volts*. Hence voltmeter V_1 should read 124.88 volts.

EXAMPLE.—The voltage V_2, at the lamp would be the voltage V_1 less the *IR* drop in the line wires. Or V_2, = 124.88 *volts* — (1.22 *amp.* × *2 ohm*) = 124.88 *volts* — 2.44 *volts* = 122.44 *volts*. Hence V_2, would read 122.44 volts.

If the prime mover driving a generator has ample power, the current which the machine may impel may be materially increased over that for which the machine is rated. However, such overloading is possible only to a certain extent, because the capacity of a machine is limited by one or all of three considerations:—

(1)—EXCESSIVE SPARKING AT THE COMMUTATOR. If the current through the brushes is much greater than that for which they were designed they will probably spark badly, and they may "flash over," that is, an arc may form between brushes of opposite polarity.

(2)—EXCESSIVE INTERNAL DROP, or excessive IR voltage drop in the armature. Since IR drop in the armature decreases the terminal voltage of the generator, if the armature current is too great the voltage which the machine impresses on its line terminals will become so low that it will not impel a sufficiently large current through the devices connected to the external circuit to operate them properly; the speed of the motors will become too low and the incandescent lamps will become too dim.

(3)—EXCESSIVE HEATING. The heating varies directly as the square of the current. If the current through a machine is too great, its conductors will become so hot that their insulation will be injured or "burnt out."

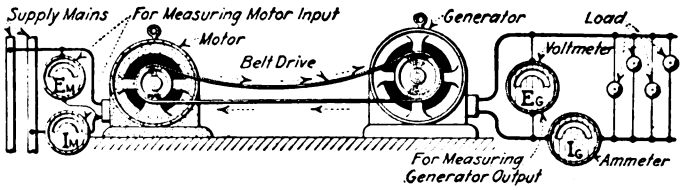

Fig. 5—Illustrating Method of Determining the Efficiency of a Generator

NOTE.—*Permissible temperature rises in electrical machinery* are determined by the temperatures the insulating material will safely withstand, since the other materials in a machine are metals which may be subjected to very high temperatures without damage. Ordinary combustible materials such as silk, cotton, paper and the like should never be subjected to temperatures greater than that of the boiling point of water—212 deg. Fahrenheit (100 deg. Centigrade). Mica, asbestos and the non-combustible materials used for insulation may, without injury, be subjected to temperatures as great as 257 deg. F. (about 125 deg. C.).

In establishing temperature-rise ratings for electrical machinery, it has been arbitrarily assumed that the temperature (Ambient temperature) in the rooms where the machinery is installed will be a standard of 104 deg. F. (40 deg. C.), This gives for the ordinary combustible installations, with the conditions as stated, a permissible rise of:—212 — 104 = 108 *deg. F.* (60 deg. C.). For the non-combustible insulating materials the permissible rise is 257 — 104 = 153 deg. F. (85 deg. C.).

The rating of a direct-current generator is the kilowatts—power—load that the machine will carry continuously without excessive (1) heating, (2) sparking, or (3) internal voltage drop. If a load greater than that for which it is rated is imposed on a machine for an extended period, it will probably give trouble, due to one of the three above-mentioned causes. Nearly all generators are so designed and rated that they will carry some over-load for an hour or so without injury. Every constant-potential direct-current generator is designed to maintain practically constant, some certain terminal voltage when operated at its rated speed. It follows that the current circulated by the machine will vary directly with the kw. load on the machine—and inversely as the resistance of the external circuit. Because of the electrical losses in the machine—I^2R, eddy-ccurrnt, and hysteresis losses—a dynamo always "generates" more power than it delivers to the external circuit.

EXAMPLE.—An 80-kw., 220-volt, 1800 r. p. m. generator is one which will, when its armature is rotated at 1800 r. p. m. maintain 220 volts at its line terminals, if the connected load does not greatly exceed 80 kw. This means that this machine can continuously and satisfactorily circulate a current of:—80,000 watts ÷

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220 volts 364 amp. In other words, it will operate satisfactorily when impelling current in an external circuit having a resistance of:—$R = E \div I = 220 \div 364 = 0.61$ ohms or more.

The losses in a direct-current generator—or in any generator—may be divided into:—(1) *mechanical losses*, and (2) *electrical losses*. Furthermore, the electrical losses may be broadly subdivided into *iron losses* and *copper losses*.

(1)—THE MECHANICAL LOSSES *include* journal or bearing friction—brush friction—the friction of the brushes on the rotating armature and *windage*. Windage is the friction of the rotating armature on the air in which it is moving. These mechanical losses may vary with the speed of the machine, but the rotational speed of a constant-potential generator is practically constant. It follows that mechanical losses are practically constant at all loads. A portion of the power input to the machine is consumed in supplying these losses and its net output is decreased accordingly.

(2)—THE ELECTRICAL LOSSES.—*Under iron losses* may be grouped the hysteresis and eddy-current losses in the armature and field cores. Under copper losses may be grouped the I^2R

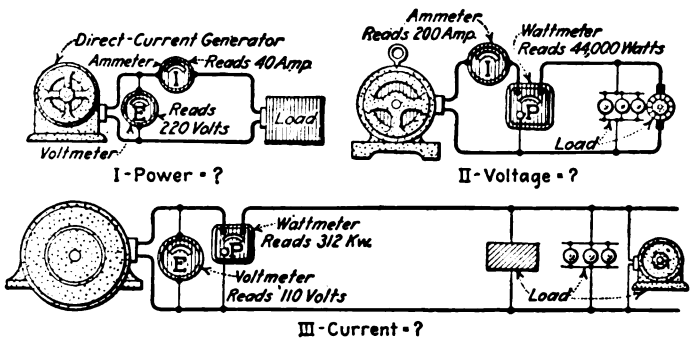

Fig. 6—Examples in the Computation of Power Output of Direct-Current Generators

losses in the armature and field windings, the eddy-current losses in the copper conductors and the losses in the controlling rheostats. Brush-contact I^2R loss is an electrical loss and is sometimes classed in with the copper losses. Most of the electrical losses increase with the load.

NOTE.—In practical testing it is often difficult, or impossible, to segregate the iron and the copper losses.

Efficiency is the ratio of:—*the electrical power delivered by the generator to the mechanical power received by it.* Hence, the efficiency of a generator is also:—

$$(7) \qquad Efficiency = \frac{(Input) - (Losses)}{Input} = \frac{Output}{Input}$$

Probably the most convenient method of determining the efficiency of a generator consists in driving the loaded generator (Fig. 5) with an electric motor of known efficiency. The electrical power output of the generator in watts can be readily ascertained by multiplying the current and voltage readings obtained from an ammeter (Ig) and a voltmeter (Eg) connected in the generator circuit. The mechanical-power input to the generator can be found by measuring the electrical input to the driving motor, by multiplying together the ammeter (Im) and voltmeter (Em) readings and then multiplying this result by the motor efficiency at this load. Their product will be the electrical input to the generator in watts, it being assumed that the belt losses are negligible, which they usually are in practical work. The efficiency will be the ratio of:—the watts output to the watts input.

EXAMPLES.—Large generators have higher efficiencies than small ones and the efficiency of any generator will vary with the load because the losses vary with the load. A good 5 kw. generator will have full load efficiency of about 82 per cent, a 100 kw. generator 91 per cent, and a 1,000 kw. generator 93.5 per cent. As an example of how efficiency varies with the load:—For a 100 kw. machine the efficiency at full load is 91 per cent; three-fourths load 90.5 per cent; one-half load 89 per cent. See the Author's *"American Electricians' Handbook"* for complete table showing full and partial load efficiencies for generators, ranging from 5 kw. to 1,000 kw. in capacity.

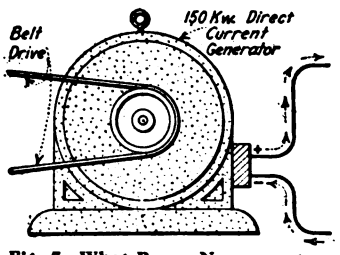

Fig. 7—What Power Necessary to Drive Generator

The output of any direct-current generator is equal in watts (power output) to the product of the pressure—voltage—and the current delivered by the machine. That is:—

$$(8) \qquad Pw = E \times I \qquad (watts)$$

$$(9) \quad \text{hence:—} \qquad E = Pw \div I \qquad (volts)$$

$$(10) \quad \text{and:—} \qquad I = Pw \div E \qquad (amp.)$$

Wherein:—Pw = power output of the generator, in watts. E = e.m. . impressed by the machine on its external circuit, in watts. I = current, in amp., flowing through the line terminals of the machine. It follows that:—

$$(11) \qquad Pk = \frac{E \times I}{1000} \qquad (kilowatts)$$

$$(12) \quad \text{hence:—} \qquad E = \frac{Pk \times 1000}{I} \qquad (volts)$$

$$(13) \quad \text{and:—} \qquad I = \frac{Pk \times 1000}{E} \qquad (amp.)$$

Wherein the symbols have the same meanings as above, except:—Pk = power output of the generator in kilowatts.

EXAMPLE.—If a voltmeter (Fig. 6—*I*) connected across the terminals of a direct-current generator reads 220 volts, and an ammeter cut in the line reads 40 amp., the watts-power output of the machine is:—$Pw = E \times I = 220 \times 40 = 8800$ *watts*. In kilowatts the power output would be:—$Pk = (E \times I) \div 1000 = (220 \times 40) \div 1000 = 8800 \div 1000 = 8.8$ kw.

EXAMPLE.—If a generator (Fig. 6—*II*) is developing 44,000 watts and the current through its terminals is 200 amp., the terminal voltage of the machine will be:—$E = Pw \div I = 44{,}000 \div 200 = 220$ *volts*. If the wattmeter reads 44 kw., then the voltage would be computed thus:—$E = (Pk \times 1000) \div I = (44 \times 1000) \div 200 = 44{,}000 \div 200 = 220$ volts.

EXAMPLE.—The current through the terminals of the direct-current generator of Fig. 6—*III*, which is developing 312 kw. at a pressure of 110 volts, would be:—$I = (Pk \times 1000) \div E = (312 \times 1000) \div 110 = 312{,}000 \div 110 = 2840$ *amp.*

The output of a direct-current generator in horsepower equals its output in watts divided by 746, or its output in kilowatts divided by 0.746. Thus:—

$$(14) \qquad HP = Pw \div 746 \qquad \text{and } Pw = HP \times 746$$

$$(15) \quad \text{or} \quad HP = Pk \div 0.746 \qquad \text{and } Pk = HP \times 0.746$$

EXAMPLE.—If a generator is developing 2000 watts, it is developing:—$Hp = Pw \div 746 = 2000 \div 746 = 2.68$ *HP*. Or if a generator is developing 85 kw., it is developing:—$HP = Pk \div 0.746 = 85 \div 0.746 = 114$ *HP*.

EXAMPLE.—A generator developing 24 h. p. is producing:—$Pw = HP \times 746 = 24 \times 746 = 17{,}900$ *watts*. Or this same generator is producing $Pk = HP \times 0.746 = 24 \times 0.746 = 17.9$ *kw.*

The power input of a generator, that is, the mechanical power required to drive the generator at any load is equal to the power output of the generator at the given load divided by the efficiency of the generator at that load. The efficiencies of the different kinds of generators at different loads are tabulated in the author's *"American Electricians' Handbook."* Stated as formula:—

$$(16) \qquad Pi = \frac{Po}{E} \text{ or } E = \frac{Po}{Pi} \text{ and } Po = Pi \times E$$

Wherein:—Pi = the power input to the generator. Po = the power output of the generator. E = the efficiency of the gener-

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ANNUAL MEETING INDEPENDENT ELECTRICAL CONTRACTORS' ASSOCIATION

The Independent Electrical Contractors' Association held its annual dinner at Moquin's, Sixth avenue and Twenty-eight street, on Wednesday evening, October 18. A. Newburger, corresponding secretary of the association, was toastmaster of the occasion. Addresses were made by President L. H. Woods, Po. 1918, Treasurer Alfred Whitely, Po. 7326, and Messrs. Munro, Bettman, Hanst and Day.

President Woods' address dealt with the problem of conducting the business of the industry on a more professional basis. Mr. Day spoke on the "Ethics of Business."

One hundred and ten members were present to partake of the banquet.

* * * *

SERVICE COMPANY NOT LIABLE FOR FAULTY WORK PERFORMED BY CONTRACTOR

In a verdict in the case of Drury vs. East St. Louis Light & Power Company it was held that an electric light and power company engaged in the business of supplying light and power to buildings in a city, and in pursuance of its contract has connected wires with the wires that have been placed on a building by another person, owes no duty to the owner of the building to inspect the work of such other person, nor assumes liability for the injury sustained by another person as the result of faulty work by such other contractor. In the case decided a child met its death as a result of coming in contact with a charged electric ground conduit pipe extending along side a building into the ground. The pipe became charged owing to insufficient grounding, and not to any negligence on the part of the lighting company.

* * * *

PITTSBURGH FELLOWSHIP COMMITTEE ENTERTAINS INCOMING EXECUTIVE COMMITTEE

T. Morris McKenna, Po. 6358, chairman of the Fellowship Committee, composed of Geo. E. Lanz, Po. 101905, J. C. Stehley, Po. 4098, R. H. Ruth, Po. 2530, D. Paul Lockard, Po. 5788, and A. G. Pierce, Po. 2898, gave a complimentary dinner to the entire active membership of the Pittsburgh League, at the Lincoln hotel, on the evening of November 11. Owing both to the spirit of good fellowship that prevailed, the splendid menu provided and the entertaining addresses, it proved to be one of the most enjoyable affairs held by the Jovian membership in recent years. The dinner was given as a fete of welcome to the incoming Executive Committee, and was successful in promoting interest in the work the League plans to accomplish under the new administration.

* * * *

NASHVILLE LEAGUE TAKES ACTIVE PART IN SAFETY MOVEMENT

Plans for a city-wide safety movement were formulated by the Nashville League at a dinner at the Commercial club, November 15. A committee composed of the following members was appointed to take charge of the movement: Jas. A. Cayce, Po. 2416, J. P. Lawrence, Po. 1825, H. S. Badger, Po. 2820, C. P. Cochran, Po. 15212, L. S. Ritter, Po. 12154. J. P. Brown, general chairman of the Nashville Safety Committee, was chairman of the meeting.

The work will be inaugurated December 4. Its first efforts will be directed towards decreasing the accidents that occur from carelessness. Later the movement will be extended to industrial activities.

* * * *

PURCHASE PRICE IN EXCESS OF VALUE

According to a ruling of the Illinois Commission, one utility may be permitted to purchase the property of another at a price in excess of the value, where better service will result. Provision must be made, however, to charge the excess to profit and loss, or liquidate out of income. The charge can neither be made to operating expense nor capital.

OFFERS PRIZE FOR BEST JOVIAN SONG

J. A. CAYCE, Po. 2416. During the Convention, Jovian Cayce announced that his firm, the B. H. Stief Jewelry Co, Nashville, Tenn., would give as a prize, a handsome piece of jewelry for the best Jovian song submitted during the year. Ell. C. Bennett, Po. 3932-13V, Mercury, and Jovian Cayce are the committee to decide.

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ator which is usually expressed as a percentage. NOTE that *Pi* and *Po* must always be expressed in the same units, which may be either watts, kilowatts or horsepower.

EXAMPLE.—If the power output of a generator is 90 kw. and its efficiency at that output is 80 per cent., the corresponding input is:—$Pi = Po \div E = 90 \div 0.80 = 112.6$ kw.

Where the electrical power output in kw. is known and it is desired to ascertain the mechanical power input in *h. p.* necessary to drive the machine at the given load, the following formula may be used:—

(17) $$HPi = \frac{Pok \times 1000}{E \times 0.746} = \frac{Pok \times 1.34}{E}$$ *(horsepower)*

(18) or $$Pok = HPi \times E \times 0.00746$$ *(kilowatts)*

(19) and $$E = \frac{Pok \times 134}{HPi}$$ *(efficiency in per cent)*

Wherein:—*HPi* = the power input, in horsepower, necessary to drive the generator at the given load. *Pok* = the given load output of the generator in kilowatts. *E* = the efficiency of the generator at the given load output, in per cent.

EXAMPLE.—What horsepower is required to drive the 150 kw. generator of Fig. 7 when it is developing its full rated load of 150 kw.? The machine has a full-load efficiency of 91.5 per cent. SOLUTION.—Substitute in the formula:—

(20) $$HPi = \frac{Pok \times 134}{E} = \frac{150 \times 134}{91.5} = 219 \text{ horsepower}$$

EXAMPLE.—If the power input to a generator which has an efficiency of 80 per cent is 70 h. p., the output of the machine will be:—$Pok = HPi \times E \times 0.00746 = 70 \times 80 \times 0.000746 = 41.8$ *H. P.*

EXAMPLE.—If a generator is developing an output of 246 kw. and its power input is then 364 h. p., what is its efficiency at this load? SOLUTION.—Substitute in the formula:—$E = (Pok \times 134) \div HPi = (246 \times 134) \div 364 = 32{,}964 \div 364 = 90.5$ *per cent efficiency.*

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OCTOBER REJUVENATIONS

NEW YORK

NINETY-THREE members of the Order were in attendance at the Rejuvenation held at the Hotel McAlpin on the evening of October 13, when nineteen candidates were initiated. Henry L. Doherty, Po. 3208-33, was the guest of honor at the Joviation held in connection with the Rejuvenation. James M. Wakeman, Po. 524, officiated as toastmaster of the occasion. Among the notable guests in attendance were: Thomas E. Murray, Po. 11994, vice-president New York Edison Company; N. F. Brady, Po. 11906, president New York Edison Company; Herbert Wagner, Po. 10371, president National Electric Light Association; Robert A. Carter, Po. 11916, vice-president Consolidated Gas Company; Arthur Williams, Po. 1917, general commercial manager, New York Edison Company.

The principal speakers were Arthur Williams, Herbert F. Wagner, Henry L. Doherty, J. Lloyd Prince, Po. 4263, H. E. Cleland, Po. 18656, business manager Electrical World; H. E. Heidrich, Po. 14439, First Tribune, Newark, N. J., and S. H. M. Agens, Po. 456, Statesman for New Jersey.

Those deserving special notice for their efforts in making the affair a success, according to reports received, are James H. Betts, Po. 6765, Fourteenth Vulcan; Roy E. Schaulin, Po. 2942, First Tribune, and J. W. Morey, Po. 2781.

The following Degree Team conferred the initiation: Roy E. Schaulin, Po. 2942, Jupiter; J. W. Morey, Po. 2781, Neptune; J. W. Morey, Po. 2781, Pluto; F. J. McJames, Po. 11988, Vulcan; Thos. Christianson, Po. 8631, Mercury; W. J. Clifford, Po. 2505, Hercules; Harry J. Hornung, Po. 5370, Mars, and W. J. Clifford, Po. 2505, Apollo.

* * * *

HARRISBURG, PA.

HARRISBURG rejuvenated six candidates at a Rejuvenation held at the Board of Trade auditorium, October 12. There were twenty-four members in attendance, including visitors. J. C. Vogel, Po. 2254-32V, Thirteenth Pluto, of Philadelphia, and J. W. Morey, Po. 2781, New York.

P. H. Bailey, Po. 13347, presided as toastmaster at the Joviation which was held at the Senate hotel following the Rejuvenation.

The principal speakers of the occasion were C. M. Kaltwasser, Po. 8510, Henderson Gilbert and S. S. Ferrie.

Members who contributed time and effort towards making the affair a success, from reports received, were: C. B. Lober, Po. 18868, C. K. Steinmetz, Po. 18875, J. C. Thompson, Po. 18877, and H. H. Bates, Po. 12415.

Following is the Degree Team: P. H. Bailey, Po. 13347, Jupiter; J. W. Morey, Po. 2781, Neptune and Pluto; H. B. Pratt, Po. 6380, Vulcan; C. P. Williams, Po. 18881, Mercury; J. C. Vogel, Po. 2254-32, Hercules; J. F. Bricker, Po. 18399, Mars; C. K. Steinmetz, Po. 18875, Apollo; Imps, Wm. Page, Po. 13713, and J. H. Boyer, Po. 18862.

H. F. NEILL, Po. 18792, Pluto on the Chicago Degree Team, who won the prize for the best portrayal of a Ritualistic part.

CHICAGO

FIRST TRIBUNE E. W. Donoho, Po. 6049, conducted a Rejuvenation at the Edison building, Chicago, on the evening of October 13. There were eight candidates to be initiated. The members in attendance numbered forty. As this was the last actual work of the Degree Team before its contest at the Annual Meeting, the work was watched with much interest. They performed the ceremony in a creditable manner, and those who watched them felt that they would win in the Convention Degree Team contest.

Following are the members of the team: F. M. Cockrell, Po. 17356, Jupiter; F. J. Reilly, Po. 17538, Neptune; H. E. Neil, Po. 18792, Pluto; C. C. Wielding, Po. 17604, Vulcan; G. K. Severn, Po. 17560, Mercury; Otis L. Johnson, Po. 5633; C. W. Bontemps, Po. 19231, Mars; D. M. Wood, Po. 17611, Apollo; C. E. Robinson, Po. 18808, Avrenim, and F. N. Tiltges, Po. 11023, C. N. Bridge, Po. 17330, and Emler Hansen, Po. 14153, Imps.

Those deserving special mention for their efforts in making the Rejuvenation a success, according to reports, were: W. C. Berry, Po. 10872, R. R. Pilkington, Po. 18800, and A. L. Nelson, Po. 15384.

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EAU CLAIRE, WIS.

AT WHAT proved in many ways to be the most successful Rejuvenation ever held at Eau Claire, fifty-seven candidates were initiated into the Order at the Eau Claire club, October 26. The initiation ceremonies followed an auto trip to Wissota Dam. Members of the League, candidates and guests left Eau Claire for the latter point at one o'clock in the afternoon, returning at five o'clock to the Eau Claire clubrooms. At 5:30 p. m. they started a parade through the city, returning at 6:30 p. m. for the Rejuvenation and banquet. In the parade the candidates were compelled to pull a street car through the streets.

W. R. Patton, Po. 1090, Fourteenth Argus, was toastmaster. Julius Hannaford and Joseph Barnhaul were among the notable guests present.

The principal speakers of the evening were N. J. Whelan, Po. 18267, and Paul S. Welsch.

According to reports the following members were very active in making the affair the big success it proved to be: A. E. Pierce, Po. 6087, N. J. Whelan, Po. 18267, John Kellog, Po. 18256, and E. C. Dearth, Po. 17144.

Following is the personnel of the Degree Team that officiated: A. R. Manley, Po. 18258, Jupiter; Albert Smith, Po. 18265, Neptune; Wm. McGovern, Po. 18259, Pluto; N. J. Whelan, Po. 18267, Vulcan; G. A. Dickson, Po. 18248, Mercury; A. C. Crandall, Po. 15411, Hercules; E. C. Dearth, Po. 17144, Mars; John J. Kelly, Po. 18255, Apollo; Gurth Williams, Po. 17268, Avrenim, and C. E. Barney, Po. 18242, Holmes Ives, Po. 18253, J. S. Hillyer, Po. 18252, and H. A. Johnson, Po. 18254, Imps.

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INDIANAPOLIS

FIRST TRIBUNE C. E. Wehr, Po. 12617, and his able assistants rounded up eighty-two candidates for the Convention Rejuvenation held at the Murat Theater, October 20. Taking into consideration the population and the number of people engaged in the electrical industry in the Indiana city, it was a splendid showing. The class brought the number initiated to a total larger than that of any other city for the year, which maintains the record set by the convention cities in the two years past.

Among the candidates initiated were some of the most prominent men engaged in the industry in the city. Included among whom were Ferd Barnickel, vice-president, Indianapolis Drop Forging Company; Guy K. Jefferies, general superintendent, Terre Haute, Indianapolis & Eastern Traction Company; William E. Munk, president, Electric Controller Company, and Bert Andrew Worthington, president, C. I. & W. Railroad Company.

The Chicago Degree Team, a photograph of which, together with the names of the members, appear on another page, conferred the initiation.

* * * *

DAYTON

DAYTON Jovians held a Rejuvenation and Joviation at the Country club on the evening of October 2, that was pronounced by those in attendance as being the most successful and enjoyable affair of the year held by the local League. There were ninety members in attendance, including a number from other points, and twenty-six candidates to initiate.

Chas. S. Hall, Po. 12345, officiating as toastmaster, introduced the following speakers at the Joviation: A. M. Wilson, Po. 12341V, First Tribune, Cincinnati; H. M. Waite, Po. 13456, city manager, City of Dayton; C. A. Kurz, Jr., superintendent, Dayton Oxygen & Hydrogen Products Company; C. W. Hozier, Po. 12348, manager Dayton office, General Electric; Frank B. Steele, Po. 13457, power engineer, Dayton Power & Light Company, and Thomas F. Kelly, Po. 1953, Statesman-at-Large.

According to reports, A. M. J. Gibbons, Po. 12341V, U. B. Auger, Po. 14109, Stanley Perry, Po. 13440, J. K. Himes, Po. 13416, G. B. Sayer, Po. 12366, and C. H. Swartz, Po. 12372, deserve special mention for their activities in making the affair a success.

C. E. WEHR, Po. 12617, First Tribune, Indianapolis, Fourteenth Administration. In the number of candidates secured in one city during the year his name, like Ben Ahdem's, led all the rest. The 82 candidates at the Convention Rejuvenation brought his total to 164.

Following is the Degree Team that performed the ceremony in an effective manner: U. B. Unger, Po. 14109, Jupiter; K. W. Nocka, Po. 13436, Neptune; A. M. J. Gibbons, Po. 12341V, Pluto; R. M. Race, Po. 16384, Vulcan; Charles C. Raitt, Po. 17772, Mercury; F. S. Breederbach, Po. 12332, Hercules; Stanley Perry, Po. 3440, Mars; Daniel A. Curran, Po. 3855, Apollo; R. E. Plaum, Po. 16920, Avrenim, and R. B. May, Po. 7650, and C. C. McKee, Po. 17770, Imps.

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FORT WAYNE

SIX NEW members were added to the roster of the Order at the Rejuvenation held at the Anthony hotel, Fort Wayne, Ind., on the evening of October 4. Included among them were J. Moores Peacock, sales manager, Shelton Electric Company, and Carl S. Tumbleson, secretary and treasurer, Fort Wayne Correspondence School.

A. A. Serva, Po. 425, First Tribune, officiated as toastmaster of the Joviation that preceded the initiation. The following speakers delivered addresses: M. B. Larimer, Po. 6166, E. F. Meyers, Po. 6170, Henry Herrman, Po. 15253, and A. A. Serva, Po. 6165, First Tribune.

Workers deserving mention for their efforts in contributing to the success of the affair are: J. J. Kline, Po. 6165, S. W. Greenland, Po. 6161, E. F. Meyers, Po. 6170, and R. J. Gaskill, Po. 11190.

The Degree Team: J. J. Kline, Po. 6165, Jupiter; F. J. Rapp, Po. 14764, Neptune; E. F. Meyers, Po. 6170, Pluto; V. M. Bussbaum, Po. 6173, Vulcan; R. J. Gaskill, Po. 11190, Mercury; S. W. Greenland, Po. 6161, Hercules; M. B. Larimer, Po. 6166, Mars; J. B. Crankshaw, Po. 6156, Apollo; H. F. Eberhard, Po. 14757, C. E. Becker, Po. 6152, and P. B. Arnold, Po. 6151, Imps.

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KANSAS CITY

KANSAS CITY initiated the largest class of the year at the Rejuvenation held on the evening of October 4. By a competitive team contest to procure applications for membership a great deal of interest was aroused, which resulted in seventy-five candidates being present to be initiated. There were an even hundred members of the Order in attendance, and the affair was a most successful one in many ways.

Herman F. Lang, Po. 842, presided as toastmaster at the Joviation. Rev. J. H. Fuller, a guest of the League, made an interesting address.

Among the workers who, from reports at hand, deserve special mention from the part they took, are: J. F. Bratney, Po. 17779, J. G Crane, Po. 13682, A. N. Richardson, Po. 16577, E. E. Stigall, Po. 9588, G. H. Schwedler, Po. 9587, F. L. Funston, Po. 3043, Sam Furst, Po. 3215, W. T. Flippin, Po. 18112, J. E. T. Lauder, Po. 843, and E. C. Waddington.

Following is the personnel of the Degree Team: P. Lloyd Lewis, Po. 6018, Jupiter; A. D. Barber, Po. 1850, Neptune; A. A. Thompson, Po. 3848, Pluto; P. M. Potter, Po. 5447, Vulcan; W. E. Saylor, Po. 15564, Mercury; G. C. Kahl, Po. 6488, Hercules; L. G. Schumacher, Po. 15565, Mars; E. W. Raushkolb, Po. 15562, Appollo; H. Tickle, Po. 18133, Avrenim, and Wm. M. Watters, Po. 3849, E. R. Johnson, Po. 9633, Charles R. Born, Po. 18109, and G. D. Roadcap, Po. 1426, Imps.

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ST. LOUIS

EIGHTEEN candidates were initiated at the Rejuvenation held at the American Hotel Annex on the evening of October 10. One hundred and thirty members were in attendance. Preceding the Rejuvenation a Joviation was held, presided over by Robert E. Lee, Po. 15706. The principal address of the evening was made by Harry W. Alexander, Po. 17191, Statesman-at-Large of New York, on "America's Electrical Week." Short talks were made by Fred Johnson, Po. 177V, and W. C. Cone, Po. 18525, regarding arrangements for transportation to the Convention. Besides an excellent menu, there was a splendid cabaret performance, and an enjoyable evening was spent by those who attended.

Following is the Degree Team that conferred the initiation: B. H. Mann, Po. 16756, Jupiter; Chas. E. French, Po. 16281, Neptune; Wm. LeMaster, Po. 11657, Pluto; Wm. L. Rose, Po. 9069, Mars; Wm. A. Koeneman, Po. 800, Hercules; J. E. Reid, Po. 11706, Apollo; A. C. Cornell, Po. 5756, Avrenim; F. C. Witte, Po. 11777, Mercury; J. P. Casey, Po. 790, Vulcan, and I. J. Ross, Po. 11716, I. J. Shulitzinger, Po. 15762, and J. E. Goards, Po. 15760, Imps.

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JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, N. Hanley, Po. 14372, 10 West Portage street, Cuyahoga Falls, Ohio.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, C. O. Nichols, Po. 15537, care Benton Harbor & St. Joseph Railway & Light Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, F. A. Coupel, Po. 584, care Buffalo General Electric Co.

CHATTANOOGA—Wednesay, 12 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, L. C. Spake, Po. 15397, 1570 Old Colony building.

CINCINNATI—Monday, 12:30 p. m., Hotel Metropole. Chairman, A. M. Wilson, Po. 14357, care University of Cincinnati.

CLEVELAND—Regular meeting, Thursday, 12 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12 m., alternately, at different hotels. Secretary, O. N. Rhoades, Po. 12702, care Columbus Railway, Power & Light Co.

DALLAS—Friday, 12:15 p. m. J. H. Moseley, Po. 11186, care Texas Power & Light Co.

DAYTON—First and third Mondays of each month, 12 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Co.

DENVER—Wednesday, 12:15 p. m., Kaiserhof Hotel. Secretary, Benedict Shubart, Po. 3496, 620 Boston building.

DETROIT—Saturday, 12:30 p. m., Grill room, Board of Commerce. Secretary, R. J. Kirchner, Po. 5199, care General Electric Co.

EAU CLAIRE, WIS.—First Monday each month. Secretary, Gurth Williams, Po. 18268.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Co.

GALVESTON—Meet on call. Secretary, K. E. Mason, Po. 10659, care Brush Electric Co.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, George Cotton, Po. 10089, City Hall.

HARRISBURG (PA).—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Co.

HUNTINGTON—Last Friday each month, Huntington Hotel. Secretary, H. A. Haddox, Po. 9164, 1116 Fourth avenue.

INDIANAPOLIS—Monday, 12:15 p. m. J. H. Albright, Po. 12484, care Indianapolis Ligth & Heat Co.

KANSAS CITY—Every other Friday, 12:15 p. m., Sexton Hotel, Secretary, L. E. Shoemaker, Po. 19190, 660 Gates building.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Co.

LOS ANGELES—Wednesday, 12 m., Christopher's, 739 South Broadway. Secretary, Clifton Peters, Po. 12734, 108 Edison building.

LOUISVILLE—Tuesday, 12:15 p. m., Watterson Hotel. Secretary, Paul Tafel, Po. 13337, 236 West Jefferson street.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel.

MILWAUKEE—Tuesday, 12 m., Maryland Hotel. President, H. J. Meyer, Po. 7365, care Vaughn-Meyer, Majestic building.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later).—Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Co.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. Chairman, Joseph H. De Grange, Po. 9192, care New Orleans Railway & Light Co.

NEW YORK—First Wednesday of each month, 12:15 p. m., Browne's Chop House. 1424 Broadway. Secretary, Jas. R. Strong, Po. 742-4, 114 West Thirtieth street.

OKLAHOMA CITY—Monday, 12 p. m., Skirvin Hotel. Secretary, O. T. Jenkins, Po. 14273, care Nunn Electric Co.

PEORIA—First and third Saturdays of each month, 1 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Co.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, Thomas H. West, Po. 8171, care the Philadelphia Electric Co., 132 South Eleventh street.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, J. H. Van Aernam, Po. 14051, care General Electric Co.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's restaurant, Kellog street. Secretary J. O. Roser, Po. 10412, care General Electric Co.

RICHMOND—Third Wednesday of each month, Business Men's Club. H. W. Hall, Po. 370, care Western Electric Co.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Co.

SACRAMENTO—Saturday, 12:15 p. m., Peerless Cafe. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Co.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Ridpath, Po. 7739, 505 Rialto building.

SPOKANE—First and third Wednesdays of each month, 12 m., Davenport's Hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Co.

ST. LOUIS—Tuesday, 12:15 p. m., American Annex. Secretary, Geo. McD. Johns, Po. 9052, Room 401 City Hall.

ST. PAUL—First and third Thursdays of each month, 12:10 p. m., Emporium Tea Rooms. Secretary, A. L. Frankenburger, Po. 5289, care Western Electric Co., 235 East Sixth street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Co.

WICHITA—First and third Mondays of each month, 12 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Co.

WINNIPEG—Every other Wednesday, 12:15 p. m., St. Regis Hotel. Secretary, W. H. Reynolds, Po. 4388V, care E. F. Phillips Electric Works, 602 Electric Railway Chambers.

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JOVIAN HOTELS

HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their **current membership cards** at the time of settlement. **Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage.** Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

	Minimum Without Bath	Minimum With Bath
Asheville, N. C.—Langren	.....	.....
Atlanta, Ga.—Winecoff	$1.50	$2.00
Atlantic City, N. J.—Isleworth	$1.50	$2.00
Baltimore, Md.—Emerson	$2.00	$2.50
Boise, Ida.—Idanha	$1.00	$1.50
Boston, Mass.—Brunswick	.....	.....
Charlotte, N. C.—Buford	$1.00	$1.50
Chattanooga, Tenn.—Theresa	.....	.....
Colorado Springs, Colo.—Acacia	.....	.....
Columbia, S. C.—Colonial	.....	.....
Dallas, Tex.—Oriental	$1.50	.....
Des Moines, Ia.—Kirkwood	.....	.....
Denver, Colo.—Albany	$1.00	$1.50
Detroit, Mich.—Hotel Tuller	.....	.....
Dixon, Ill.—Dixon Inn	$1.00	.....
Edmonton, Alta.—Alberta	.....	.....
Eau Claire, Wis.—Eau Claire	.....	.....
Ft. Wayne, Ind.—Wayne	$1.00	.....
Ft. Worth, Tex.—Metropolitan	.....	.....
Gary, Ind.—Gary	$1.00	$1.50
Grand Rapids, Mich.—Livingston	$1.00	.....
Harrisburg, Pa.—Columbus	.....	.....
Houston, Tex.—Bender	$2.00	.....
Hutchinson, Kan.—Chalmers	.....	.....
Idaho Falls, Ida.—Eleanore	$1.00	$2.00
Jackson, Miss.—Royal	.....	.....
Jacksonville, Fla.—Mason	.....	.....
Jacksonville, Ill.—Pacific	.....	.....
Kalispell, Mont.—Kalispell	$1.00	
Kansas City, Mo.—Coates	$1.00	$1.50
Lethbridge, Alta.—Alexandria	$1.00	.....
Los Angeles, Cal.—Clark	.....	.....
Los Angeles, Cal.—New Rosylyn	$1.00	$1.50
Louisville, Ky.—Galt	.....	.....
Madison, Wis.—Capital	$1.00	.....
Milwaukee, Wis.—Charlotte	$1.00	.....
Mitchell, S. D.—New Navin	.....	.....
Montgomery, Ala.—Exchange	.....	.....
Montreal, P. Q.—St. Lawrence	.....	.....
Montreal, P. Q.—Windsor	.....	.....
Muskegon, Mich.—Muskegon	$1.00	$1.50
New Orleans, La.—De Soto	$1.00	.....
New York, N. Y.—Breslin	.....	.....
Niagara Falls, N. Y.—Prospect	.....	.....
Norfolk, Va.—Southland	$1.00	$1.50
Oshkosh, Wis.—Tremont	.....	.....
Peoria, Ill.—Mecca	$1.00	
Philadelphia, Pa.—New Bingham	$1.50	$2.50
Pittsfield, Mass.—Wendell	$1.50	.....
Portland, Ore.—Multnomah	$1.50	
Portland, Ore.—Oregon	$1.00	$2.00
Richmond, Va.—Jefferson	$1.50	$2.50
Richmond, Va.—Richmond	$1.50	$2.50
Roanoke, Va.—Rockledge	$1.00	.....
Rochester, N. Y.—Powers	.....	$2.00
Rutland, Vt.—Berwick	.....	.....
St. Joseph, Mo.—St. Francis	.....	.....
St. Louis, Mo.—American	$1.50	.....
Salt Lake City, Utah—Newhouse	.....	.....
San Angelo, Tex.—Landon	.....	.....
San Diego, Cal.—San Diego	$1.00	.....
San Francisco, Cal.—Argonaut	$1.00	$2.00
San Francisco, Cal.—Sutter	$1.50	.....
Santa Barbara, Cal.—Potter	.....	.....
Schenectady, N. Y.—Mohawk	$1.00	$2.00
Seattle, Wash.—Seattle	$1.00	$2.00
Sheridan, Wyo.—Sheridan	.....	.....
Shreveport, La.—Youree	.....	.....
Sioux City, Ia.—Martin	$1.00	$2.00
Spokane, Wash.—Spokane	.....	.....
Springfield, Mo.—Colonial	.....	.....
Stockton, Cal.—Clark	.....	.....
Tacoma, Wash.—Olympus	.....	.....
Three Rivers, Mich.—Three Rivers	$2.00	.....
Tucson, Ariz.—Heidel	.....	.....
Vicksburg, Miss.—Carroll	$1.00	.....
Waco, Tex.—New State	$1.00	$2.00
Watertown, S. D.—Kampeska	$1.00	.....
Winnipeg, Man.—St. Regis	$1.50	
Winnipeg, Man.—Wellington	$1.00	$1.50
Winona, Minn.—Winona	.....	.....

Coming Conventions

Kansas Public Service Association

Annual meeting, Topeka, Kan., December 7-8. Secretary, E. A. Wright, Manhattan, Kan.

American Association For the Advancement of Science

Annual meeting, New York City, December 26-30. Permanent Secretary, L. O. Howard, Smithsonian Institution, Washington, D. C.

American Institute of Chemical Engineers

Annual convention, New York City, January 10-1 917. Secretary, J. C. Olson, Cooper Union, New York, N. Y.

GENERAL NEWS

A meeting of old time telegraphers September 26 at the Hotel Astor, New York, brought together, to exchange reminiscences, three hundred "brass pounders" who operated in the palmy days of the profession. The organization is known as the "Old Time Telegraphers and Historical Association." Many of the members have long since turned to other lines of business. A number of them have attained distinction and are prominent in the industrial affairs of the country, while others have not prospered so well. But, actuated by the human sentiment contained in Burn's poem, "Should Auld Acquaintance Be Forgot," they continue to keep alive the spark of fellowship that burned in the days when they were all on "The firing line." Prominent among those to participate in the meeting this year were W. N. Canniff, former president of the Nickel Plate Railroad, president of the association; T. W. Hill, of the Cleveland National Bank, and F. W. Strong, superintendent, Postal Telegraph & Cable Co., Cleveland.

* * * *

A general advance on all lines of heating appliances, owing to the increased price of metals will probably be announced in the near future. Increases have already been made on some articles by a number of manufacturers, and while no firm has announced a general increase on all lines, it is felt that the advances will have to be made in the near future and will include ranges as well as appliances.

* * * *

Owing to the scarcity of brass and nickel, flash-light manufacturers are experiencing the same difficulty felt in other lines. The demand for flash-lights this year exceeds that of any other period by probably 100 per cent, due both to export and domestic orders.

* * * *

Gasoline-electric tractors are being used by the New York City street cleaning department to collect ashes, garbage and to sweep and flush the streets. The tractors are provided with a trailer which carries a 1500 gallon water tank. At the dumping dock the can is lifted from the trailers and dumped by a crane.

* * * *

DENVER CONSIDERS NEW LIGHTING CONTRACT

The Denver Gas & Electric Company, Denver, Colorado, is now considering a new contract for light, which has been referred to the Committee of Public Utilities by that city. The term of the new contract begins June 1, of this year, extending over a period of ten years, and proposes an approximate saving of $36,000 per year. Under the new contract arc lamps will be $50 and incandescent lamps $20 each. Under the old contract the costs were $60 and $30, respectively. The electric company will install equipment under the direction of the mayor of the city and standards will be furnished by the city under the supervision of the city's electrician. The new contract also makes provision for arbitration in cases of dispute. The company agrees to maintain the efficiency of the lighting system and assume responsibility for suits growing out of its negligence.

PRESS DATE

THE DATE for sending The JOVIAN to the press is the fifteenth of each month. While it is possible to prepare a limited amount of material for its pages, if received between the tenth and fifteenth much more attention can be given the write-up of matter received before the tenth of the month. Material containing photographs from which plates will have to be made should be in the hands of the editors by the fifth of the month to allow time to handle them properly. During the past there has been some negligence in making Rejuvenation news reports, and details of League activities have been very meager in a number of instances. **Help us give your affair the attention it deserves by mailing us a report covering the important features immediately after it is over.**

THE JOVIAN.

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WICHITA WILL HOLD ELECTRICAL SHOW

An electrical show will be held in the Wichita Forum, Wichita, Kan., December 6, 7 and 8, as a celebration of "America's Electrical Week." The show will be entirely under the management of the Wichita League. Owing to a unique scheme of uniting a means of financing with one for advertising, there is every reason to believe the show will be a great success. At a meeting of the League in September, a suggestion made by P. W. Agrelius, Po. 15854, that several thousand buttons bearing the picture of the prize Aladdin Poster be made and sold, was adopted. The buttons admit their owners to the show, at which an admission price of ten cents will be charged.

From accounts received, the plan has proved successful, and a record attendance is expected.

* * * *

ELECTRICAL INDUSTRY ACTIVITIES

At the general election, November 7, voters of Newton, N. J., approved a proposal for an appropriation of $8,000 for the installation of an electric street-lighting system in the business district of the town.

* * * *

The transfer of the property of the Gettysburg Light Company to the Gettysburg Electric Company was recently made at Gettysburg, Pa. The new concern is controlled by Scranton capitalists. It will continue the operation of the local plant until a transmission line has been constructed from Hanover, another of the new company's properties, after which current will be supplied from that point.

* * * *

A new generating station is being built by the New Bedford Gas & Edison Light Company of 37,000 kilowatt capacity, the estimated cost of which is $1,700,000. The construction of the new plant was made necessary by the rapid growth of business. When it is finished the old plant will be dismantled.

* * * *

A new company has been organized at Little Rock, Ark., capitalized at $500,000, for the purpose of supplying current to Lonoke, Carlisle, Hazen, Devil's Bluff and intermediate points. Associated in the movement are S. R. Morgan of Little Rock, J. R. Perkins of St. Louis and R. O. Lehan of Chicago.

* * * *

The Intermountain Power Company has filed articles of incorporation at Butte, Mont., with the object of developing water power in Montana and adjoining states. The principal office of the company is to be at Butte. The articles of incorporation fix the corporation's life at forty years. The capital stock is $500,000, its incorporators are C. F. Kelly, Charles J. Kelly, John Gillie, L. O. Evans and Eugene Carroll. The locations of the power sites have not been announced.

WANTED—Experienced cost and quotation clerk, electrical supply house. State age, experience and salary. Address "G," care The JOVIAN, Syndicate Trust Building, St. Louis, Mo.

FOR SALE—A franchise to make, distribute and sell electricity in a city of over 20,000 population. The franchise has yet a long period to run. Address "C," care The JOVIAN, Syndicate Trust Building, St. Louis, Mo.

MANUFACTURER'S AGENT WANTED IN CLEVELAND to handle our complete line of Insulating Varnishes, Compounds, Electrical Mica, Soldering Fluxes, Cable Compounds and Structural Paints.
DIELECTRIC MFG. COMPANY, St. Louis, Mo.

SALESMAN—Established, with electrical and chandelier trade in western, southern and southwestern states, wishes an additional line on commission. Address, "S," care of The JOVIAN, Syndicate Trust Building, St. Louis, Mo.

ELECTRICAL SALESMAN with experience in manufacturer's office and acquainted with textile business desires to make change. Address, "Textile," care of The JOVIAN, Syndicate Trust Building, St. Louis, Mo.

FOR SALE—The undersigned has, at Hickory, N. C. the Bi-polar Motor No. 1, 3 kw., made by Edison—"Edison, Electric Light Co., Pat. Dec. 22, 1879, Builders, New York, U. S. A., No. 56." "Edison Machine Works." The last time it was tried, which was several years ago, it operated. Having no other use for it, only as a souvenir, and being suddenly rendered more in need of funds than souvenirs, he very much desires to sell it to some one who can and will preserve it. M. E. Thornton, Po. 5273V, P. O. Box 448, Hickory, N. C.

JOVIANS LOOK!

THE Jovian Constitution provides that a ballot be published here on which each Jovian may indicate his preference as to any individual for any elective office. The ballots are to be handed to the Nominating Committee for their information and guidance. Fill it out and mail to

THE JOVIAN ORDER

SYNDICATE TRUST BLDG. ST. LOUIS

THE JOVIAN ORDER
SYNDICATE TRUST BLDG.,
ST. LOUIS

My preference for (state name of office)

.....

for the next administration is.....

.....Po.....

(Sign here)

.....Po.....

City..... State.....

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STATESMEN-AT-LARGE

ALEXANDER, H. W., Po. 17191, 29 West 39th St.....New York, N. Y.
BINFORD, JULIAN, Po. 1174V, care Westinghouse Lamp Co.....Atlanta, Ga.
BISCHOFF, W. E., Po. 3190, care W. N. Matthews & Bro.....Chicago, Ill.
CHAPPEL, H. C., Po. 5609, Box 352, Central Station.....Toledo, Ohio
COLKITT, J. N., Po. 2627, care John A. Roeblings Sons Co.....Los Angeles, Cal.
CROWFOOT, C. M., Po. 1182, care Crouse-Hinds Co.....Cincinnati, Ohio
CROW, GALEN, Po. 925V, care Public Service Co. of Oklahoma.....Guthrie, Okla.
DOWNS, B. M., Po. 2508, care Hemingray Glass Co.....Covington, Ky.
DUNHAM, A. W., Po. 7352, care Sun Ray Manufacturing Co.....Oshkosh, Wis.
FOSTER, F. C., Po. 3398, 823 Illuminating Building.....Cleveland, Ohio
GUARDIA, A. A., Po. 2657, 4447 Magnolia Ave.....Chicago, Ill.
HERSTEIN, W. R., Po. 765V, care Electric Supply Co.....Memphis, Tenn.
HILL, G. W., Po. 1271, 29 West 39th St.....New York, N. Y.
JOHNSON, FRED, Po. 177V, 1110 Federal Reserve Bldg.....St. Louis, Mo.
LAUDERBACH, F. E., Po. 11655, 917 Pine St.....St. Louis, Mo.
MONTGOMERY, R., Po. 6147, care Louisville Gas & Electric Co.....Louisville, Ky.
RAMIER, J. F., Po. 10604, care Memphis Cons. Gas & Electric Co..Memphis, Tenn.
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville, Ky.
RIPLEY, L. O., Po. 7042, care Kansas Gas & Electric Co.....Wichita, Kan.
SERVA, A. A., Po. 425, 2420 Hoagland Ave.....Ft. Wayne, Ind.
VIOT, H. F., Po. 2156, 1810 Farnam St.....Omaha, Neb.
VOGAN, W. G., Po. 15974, care Northern Electric Co.....Winnipeg, Man.
VOGEL, J. C., Po. 2254-32V, 59th and Woodland Ave.....Philadelphia, Pa.
WADDINGTON, E. H., Po. 5176, care Western Electric Co.....St. Louis, Mo.
WAKEMAN, J. M., Po. 524, 29W 39th St.....New York, N. Y.

JOVIAN STATESMEN

ALABAMA
MATTHEWS, H. W., Po. 4476, care Burgoon-Matthews Electric Co.....Birmingham

ARKANSAS
CROUCH, H. C., Po. 13893, care Arkansas Power Co.....Little Rock

CALIFORNIA
ORRICK, MURRAY S., Po. 5886, care Western Electric Co.....San Francisco

COLORADO
TRAVER, A. F., Po. 2354, care Denver Gas & Electric Co.....Denver

DELAWARE
FADER, W. L., Po. 2883, care Newark Garage & Electric Co.....Newark

GEORGIA
COLLIER, RAWSON, Po. 4458, care Georgia Railway & Power Co.....Atlanta

IDAHO
KIERSTED, EARNEST C., Po. 10258, care G. S. & T. F. Water Power Co...Twin Falls

ILLINOIS
CORBY, J. C., Po. 755V, care Bryan-Marsh Electric Works, General Electric Co.....Chicago

INDIANA
OBLINGER, R. P., Po. 4851, care Indianapolis Electric Supply Co.....Indianapolis

IOWA
DUBIN, B. H., Po. 10301, care Bryan-Marsh Works, General Electric Co...Des Moines

KANSAS
TAYLOR, J. E., Po. 15570, care Western Electric Co.....Kansas City

KENTUCKY
TAFEL, PAUL, Po. 13337, care H. C. Tafel Electric Co.....Louisville

LOUISIANA
CLEMENT, W. E., Po. 2557, care New Orleans Railway & Light Co.....New Orleans

MAINE
BROWN, T. J., Po. 1134, care General Electric Co.....Portland

MARYLAND
HILL, C. PHILLIPS, Po. 2925, care Doubleday-Hill Electric Co...Washington, D. C.

MASSACHUSETTS
TROY, M. O., Po. 3271-37, care General Electric Co.....Schenectady, N. Y.

MICHIGAN
CAVANAUGH, J. A., Po. 11199, care Benton Harbor & St. Joe Ry. Co...Benton Harbor

MINNESOTA

NORTH AND SOUTH DAKOTA
ROFELTY, O. A., Po. 7839, care General Electric Co.....Minneapolis

MISSISSIPPI
GORENFLO, W. F., Po. 3342, P. O. Box 28.....Gulfport

MISSOURI
DENTON, A. P., Po. 1415V, care Denton Engineering & Construction Co.....Kansas City

NEBRASKA
ZIMMAN, I. B., Po. 1411, care Omaha Electric Light & Power Co.....Omaha

NEW HAMPSHIRE
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston, Mass.

NEW JERSEY
HEIDRICK, HERMAN C., Po. 14439, care Electric Repair & Motor Co.....Newark

NEW YORK
CLELAND, H. E., Po. 18656, care Electrical World.....New York City

NORTH CAROLINA
HARRILL, A. V., Po. 5015, care Southern Power Co.....Winston-Salem

OHIO
WILSON, A. M., Po. 14357, care University of Cincinnati.....Cincinnati

OKLAHOMA
MUSSON, H. E., Po. 7899, care Telephone, Gas & Electric Co.....Oklahoma City

OREGON
MOODY, A. S., Po. 4576, care Pacific States Electric Co.....Portland

PENNSYLVANIA
PEIRCE, C. L., Po. 3252, care Hubbard & Co.....Pittsburgh

RHODE ISLAND
DAVENPORT, E. R., Po. 8019, care Narragansett Electric Light Co....Providence

SOUTH CAROLINA
FULLER, W. W. Po. 16462, care Isle of Palms Traction Co.....Charleston

TENNESSEE
FLOURNOY, FRANK, Po. 14793, care Cumberland Telegraph & Telephone Co.....Memphis

TEXAS
PHIPPS, W. R., Po. 10676, care Brush Electric Light Co.....Galveston

UTAH
BRANDENBURGER, LEO, Po. 4755, care O. H. Davidson Equipment Co.....Salt Lake City

VERMONT
LARABEE, E. E. Po. 1145, care Twin States Gas & Electric Co.....Bennington

VIRGINIA
SEILER, GUY E., Po. 7479, care Virginia Railway & Power Co.....Richmond

WEST VIRGINIA
POWERS, W. R., Po. 2784, care Consolidated Heat, Light & Power Co..Huntington

WISCONSIN
CRABTREE, WALTER B., Po. 6155, care Mechanical Appliances Co.....Milwaukee

PROVINCE OF ALBERTA
RICHARDS, NORMAN S., Po. 8985, care Northern Electric Co.....Calgary

PROVINCE OF BRITISH COLUMBIA
DAVIS, ROY S., Po. 8454, care Davis-Hartney Co., Ltd.....Vancouver

PROVINCE OF MANITOBA
SCHUMACHER, J. H., Po. 4742, Schumacher-Gray Co., Ltd.....Winnipeg

PROVINCE OF QUEBEC
HYDE, E. N., Po. 1614, care Northern Electric & Manufacturing Co., Ltd..Montreal

FIRST AND SECOND TRIBUNES

ALABAMA
MATTHEWS, H. W., Po. 4476, First Tribune, care Burgoon-Matthews Electric Co.....Birmingham
REYNOLDS, H. C., Po. 2072, First Tribune, care Southeastern Underwriters' Association.....Mobile

ARKANSAS
DREES, C. J., Po. 1572, First Tribune, care Arkansas Electric Co.....Little Rock
RUSH, J. C., Po. 1556, First Tribune, care Rush Bros.....Hot Springs

CALIFORNIA
*BROCKWAY, A. E., Po. 6039, First Tribune, care Latourrette Fiscal Co., 3431 Sacramento Ave.....Sacramento
(*J. O. Tobey, Po. 12226, Second Tribune)
*FISHER, R. E., Po. 7389, First Tribune, care Pacific Gas & Electric Co..San Francisco
(*W. L. Neelands, Po. 9395, Second Tribune)
KLAUBER, L. M., Po. 14635, First Tribune, care San Diego Consolidated Gas & Electric Co.....San Diego
(R. C. Cavell, Po. 14627, Second Tribune)
*MURPHY, W. A., Po. 12220, First Tribune, Stockton Hotel Annex.....Stockton
*SESSIONS, H. N., Po. 14256, First Tribune, care Southern California Edison Co., 120 East Fourth St.....Los Angeles
(*K. E. Van Kuran, Po. 7062, Second Tribune)
WOODWARD, FRANK H., Po. 1767, First Tribune, care Great Western Power Co.....Oakland
(Hill, B. C., Po. 9366, Second Tribune)

COLORADO
*TRAVER, ALVA F., Po. 2354, First Tribune, Denver Gas & Electric Co....Denver
(*Harry L. Woolfenden, Po. 1062, Second Tribune)

DISTRICT OF COLUMBIA
CARROLL, HARRY R., Po. 1794, First Tribune, 514 Twelfth St., N. W..Washington

GEORGIA
WALLIS, EDWARD J., Po. 4487, First Tribune, care Western Electric Co....Atlanta
(Geo. E. Watts, Po. 12482, Second Tribune)

IDAHO
MCKELVEY, G. E., Po. 9704, First Tribune, care Electric Investment Co....Boise
*DOVERY, C. G., Po. 10241, First Tribune, Idaho Power Co.....Twin Falls
(*J. O. Blackstone, Po. 15318, Second Tribune)

ILLINOIS
BASS, THEODORE E., Po. 10868, First Tr bune, care Natl. Elec. & Auto Co..Peoria
(W. A. Green, Po. 13279, Second Tribune)
LANPHIER, R. C., Po. 3236, care Sangamo Electric Co.....Springfield
(James R. Massey, Po. 8930, Second Tribune)
MORSE, CHESTER A., Po. 14611, First Tribune, care Central Public Illinois Service Co.....Mattoon
(Donald R. Truax, Po. 14617, Second Tribune)
*MOTT, H. A., Po. 17507, First Tribune, care Chicago Telephone Co., 212 W. Washington St.....Chicago
(*A. L. Nelson, Po. 15384, Second Tribune).
WESSEL, O. E., Po. 9814, First Tribune, care East St. Louis Light & Power Co.....East St. Louis
(Chas. E. Broderick, Po. 1154, Second Tribune)
YONTS, CHAS. B., Po. 11040, First Tribune, care Northern Illinois Utilities Co.....Dixon

INDIANA
HARRIS, A. B., Po. 14154, First Tribune, 570 Washington St.....Gary
*LEE, WALLACE O., Po. 11440, First Tribune, Indianapolis Light, Heat & Power Co.....Indianapolis
NIGHT, CHAS. H., Po. 4828, First Tribune, care Indiana & Michigan Electric Co.....South Bend
SERVA, A. A., Po. 425, First Tribune, care Ft. Wayne Works of General Electric Co.....Ft. Wayne
(E. S. Meyers, Po. 6161, Second Tribune)

IOWA
KING, R. H., Po. 3984, First Tribune, care King Plumbing Co.....Keokuk
*LOVEGROVE, N. W., Po. 10241, First Tribune, care Herring Motor Co Des Moines
MCINNERNEY, B., Po. 1400, First Tribune, care Kimball Bros. & Co..Council Bluffs
(E. S. Damon, Po. 1398, Second Tribune)
MURPHY, J. E., Po. 15800, First Tribune, care Murphy-Dunham Co..Sioux City
(C. A. Nash, Po. 10233, Second Tribune)

KANSAS
CATES, WILLIAM C., Po. 17862, First Tribune, care Cates Electric Co...Hutchinson
*HARVEY, J. L., Po. 6546, First Tribune, care General Electric Co., 945 Emporia St.....Wichita
(Stanley, Charles A., Po. 9690, Second Tribune)
HAGLER, CHARLES M., Po. 16508, First Tribune, 120 E. Irin St.....Salina
(J. E. French, Po. 15811, Second Tribune)

KENTUCKY
HANNAH, W. M., JR., Po. 13652, First Tribune, care General Electric Co..Lexington
MONTGOMERY, ROBERT, Po. 6147, First Tribune, care Louisville Gas & Electric Co.....Louisville
C. C. Childers, Po. 15494, Second Tribune)

LOUISIANA
CLEMENT, W. E., Po. 2557, First Tribune, care New Orleans Railway & Light Co.....New Orleans
(Abe Marks, Po. 9182, Second Tribune)
JOUBERT, W. C., Po. 16467, First Tribune, 403 Main St.....Baton Rouge
WILLIAMS, J. A., Po. 5053, First Tribune, care Southwest Gas & Electric Co.....Shreveport
(H. E. Cahn, Po. 13025, Second Tribune)

MARYLAND
ROSENFELD, E. I., Po. 2751, First Tribune, 10 S. Howard St.....Baltimore
(Stanley B. Prather, Po. 1650, Second Tribune)

MASSACHUSETTS
*DERRY, H. W., Po. 8022, First Tribune, care Pittsfield Electric Co.....Pittsfield
(*L. G. Crawford, Po. 7930, Second Tribune)
LAVIN, LEO J., Po. 15143, First Tribune, 95 Pleasant St.....Worcester

MICHIGAN
*BRUSH, NORMAN, Po. 11198, First Tribune, care Capital Electric Co.....Lansing
(*Guy G. Crane, Po. 13059, Second Tribune)
CAVANAUGH, J. A., Po. 11199, First Tribune, care Benton Harbor & St. Joe Railway & Light Co.....Benton Harbor
(John Erickson, Po. 16515, Second Tribune)
COTTON, GEORGE, Po. 10089, First Tribune, 821 Lyon St.....Grand Rapids
(Carl Johnston, Po. 12841, Second Tribune)

(*These First and Second Tribunes appointed by Reigning Jupiter. All Statesmen-at-Large and Statesmen in this list were appointed during this administration.)

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MICHIGAN—Continued

KLOSE, LEROY, Po. 13959, First Tribune, care L. R. Klose Electric Co..Kalamazoo
(Harry D. Georgia, Po. 16324, Second Tribune)
DUQUETTE, EDWARD, Po. 14965, First Tribune, 69 Mason Ave.....Muskegon
EPPES, BOYD H., Po. 3042, First Tribune, care Consumers' Power Co..Battle Creek
HOLLAND, RAY K., Po. 11476, First Tribune, care Gardner & Williams, Cornwall Building.....Ann Arbor
(Geo. E. Lewis, Po. 11481, Second Tribune)
KIMBLE, RICHARD L., Po. 283, First Tribune, care Electric Supply Co...Saginaw
(Geo. A. Trombley, Po. 14750, Second Tribune)
KLING, ALPHA H., Po. 286, First Tribune, 1717 Dime Bank Building....Detroit
(T. E. Lowe, Po. 11027, Second Tribune)
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St.....Traverse City
SCHAGANE, P. F., Po. 13871, First Tribune, 617 So. Saginaw St.....Flint
TIGHE, THOS. J., Po. 11216, First Tribune, care General Electric Co.....Jackson
(H. W. Courville, Po. 13954, Second Tribune)

MINNESOTA

FULLER, FLOID M., Po. 8189, First Tribune, 813 Torrey Building.....Duluth
ROFELTY, O. A., Po. 7839, First Tribune, care Minneapolis General Electric Co.....Minneapolis
(W. O. Curtis, Po. 11830, Second Tribune)

MISSISSIPPI

CHAPPELL, JOHN O., Po. 14040, First Tribune, care Meridian Light & Railway Co.....Meridian
GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co.....Gulfport

MISSOURI

ANDERSON, GEORGE E., Po. 2132, First Tribune, 117 South William St....Moberly
(Nelson Roth, Po. 1427, Second Tribune)
BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co.....Marshall
(H. T. Ford, Po. 17761, Second Tribune).....Springfield
*CORNELL, A. C., Po. 5756, First Tribune, care Western Electric Co., 814 Spruce St.....St. Louis
(*C. E. Michel, Po. 9061, Second Tribune)
HENDERSON, C. C., Po. 6249, First Tribune, P. O. Box 302.....Joplin
(A. M. Grall, Po. 4112, Second Tribune)
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(*These First and Second Tribunes appointed by Reigning Jupiter. All States-at-Large and Statesmen in this list were appointed during this administration.)

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THE JOVIAN

Volume Eleven JANUARY, 1917 Number Two

BUILDING A CAREER

By W. A. Layman, Po. 1166V, Seventh Mars, President, Wagner Electric & Mfg. Co.

Address Delivered Before the Jovian Convention at Indianapolis, October 20

THE SUBJECT assigned to me today, I am tempted to say, rings singularly out of tune with the spirit of the times. We seem to have our being in an atmosphere of effervescence. Our generation, as also the next, seems to wend its care free journey down the "great white way" of irresponsibility. We seem to have no sorrow save the melancholy of overjoyousness; no retrospection save that which we medicate with the aspirin of the ensuing dance; no anticipation save photo-play visions of a new Paradise, even more bacchanalian than the passing today in which the prim virtues of our ancestors seem safely alcoholized against reanimation.

Indeed it seems to savor of archaeology to be digging up so antiquated a proposition as the building of a career. If so, why cast over so auspicious an occasion the gloom of an attempt to translate into the joy ride of today, the pilgrims' progress of our fathers. The cynic would say there is but one purpose to be achieved in making a feeble effort to do so, namely that we owe a faint duty to ourselves to place among the buried graphophone records of our day some historical evidence that a tinge of the one time serious aspects of life may be spectroscoped out of our mentalities. He would say this were necessary lest the highly Darwinized evolutes of ourselves in the remote ages to come, fail to find in the process of their geological excavations any tablet evidences of our racial lineage to those prim Puritans of our virtuous past, who deemed this life to be one of purpose rather than of iridescent joyousness.

But I do not share the cynic's point of view. It is true beyond question that this is an age of joyousness, but it is as well an age of achievement. The careers are not all behind us, nor are they all in the future. They are in the making about us, and the method of their achievement may well occupy our attention for a time. Nevertheless, living so much as we do in the present, it may profit us to look for a moment into the past.

Do you recall a man named Abraham Lincoln? He is said to have built a career. Strange as it may seem to the cynic of this generation, he rose above his environment. He was not *sent* to college. He did a bit of real manual labor in his youth—vivisected some trees into a useful landscape effect called a rail fence. He achieved one distinction of the modern chorous girl—his library also consisted of *a* book. But his was the Holy Bible, and from its pages he gleaned that serious purpose in life which flowered into the physical, moral and intellectual freedom of four million human beings. From the lowly fireside of a primitive shanty with a single room, he progressed through several jobs, not secured for him by influential relatives, to an eternal martyrdom thrust upon him by the American people. He wrote several important papers, but is not quoted as having said in any one of them that eight hours was a full work day, nor that ten hours' pay for eight hours' work should be given by all of our people to a few of our people. If I could project before your eyes a faithful photo-play of this immortal man, would there be occasion to say more to you upon the "Building of a Career"?

There have been other names of the past occasionally echoing into our so called ragtime atmosphere, suggestive of the theme to which I am humbly attempting to respond. A certain George Washington is one of these. Reminiscence has it that he built a career—that he possessed attributes of character described by the words sometimes alleged to be partially obsolete, *determination*, *sincerity* and *self-sacrifice*. He once served the nation by defying certain obstacles in the form of ice flows in a very wide river, to which he did not apply the modern principle of waiting for the summer thaw to melt them out of his pathway. He practiced the now partially lost art of preparedness, and in that classic called the "Farewell Address" really used the following language:

> "I hold the maxim no less applicable to public than to private affairs, that honesty is always the best policy."

Does it not sound old-fashioned? And when his country needed his services, he did not raise the salary question. How unbusinesslike in modern parlance sounds that paragraph in his acceptance of the appointment of Commander-in-Chief:

> "As to pay, sir, I beg leave to assure Congress that as no pecuniary consideration would have tempted me to accept this arduous employment at the expense of my domestic ease and happiness, I do not wish to make any profit from it. I will keep an exact account of my expenses; those I doubt not they will discharge, and that is all I desire."

The same strange spirit stands forth in the first Inaugural Address:

> "When I was first honored with a call into the service of my country, then on the eve of an arduous struggle for its liberties, the light in which I contemplated my duty required that I should renounce every pecuniary compensation. From this resolution, I have in no wise departed, and being still under the impression which produced it, I must decline as inapplicable to myself any share in the personal emoluments which may be indispensably included in a permanent provision for the executive department, and must accordingly pray that the pecuniary estimates for the situation in which I am placed may, during my continuance in it, be limited to such actual expenditures as the public good may be thought to require."

Would not a panorama of the life of the Father of our Country also alone suffice, were I able to project it before you, to cover fully my subject of "Building a Career"?

Still looking down the receding corridors of the past, and with the echoes of the great struggle across the seas ringing in our ears, how naturally our eyes center upon the great soldier of our own boyhood days—Ulysses S. Grant. Would you not call it "building a career" to rise from the humility of the lowly farmer, selling cord wood upon the streets of St. Louis to the greatest military and political honors of our land? How much, think you, of the secret of a career so great, finds explanation in his quiet:

> "I propose to fight it out on this line if it takes all summer"?

And is it not suggestive to the incipient presidents of our own generation and time, that he turned the tide of the North's discouragement by throwing himself between and defeating two Southern armies and taking the City of Vicksburg, through an original strategy of detachment from his supply base, absolutely unwarranted by the precedents of military history?

Gentlemen, it is with reluctance that I turn from the past with its just claims to our humble reverence to the memory of its

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

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MR. LAYMAN'S ADDRESS

WHEN you start to read "Building a Career" prepare your mind for something out of the ordinary, for you will find it. It is not our intention to tell you how good Mr. Layman's address is, for that would be but an expression of our personal opinion. What is of far more importance is that you read it with an open mind susceptible to the heighth and breadth of a subject that in the course of ethnology has covered phases of human effort wherever directed.

The ages-old characteristic of attributing opportunity to the past, could not be more vividly expressed than in the phraseology of the author, "—to translate into the joy-ride of today the pilgrim's progress of our fathers." Each evolution of human existence has come to us dressed in the fashion of its time. We look for the road that our forebears traveled and find it footworn. Progress demands something new—new colors, new designs, new manners. But these are only the decorations to please our fastidiousness. The material for the structure must be sincerity. The construction of the building is the work of virtue.

There are other points as vividly brought out. The characters for illustration are well chosen; the tone and style are in splendid keeping with the subject. There is ample food for philosophic and moral reflection, and an abundance of human interest to enliven the story.

We believe you will like it.

* * * *

WHY SOCIETY FOR ELECTRICAL DEVELOPMENT MEMBERS SHOULD HELP TO PROMOTE THE JOVIAN ORDER

THE WHOLE story might be told in six words: Because of a community of interests. Members of the Society actively desire the development of the electrical industry along constructive, efficient lines, or they would not be members.

Jovianism stands for the same purpose; is striving with all its might to accomplish it.

It has done much for the Society; much for Society members.

Outside of the Society itself it has been the greatest single influence, the most important element in returning to Society members a profit on their investment in the Society.

Let that sink in deep. It deserves treasuring in those chambers of the mind from whence issue gratitude and reciprocation.

Give also this fact earnest consideration: The greater and more powerful the Jovian Order, the larger the number of its effective local Leagues, the more numerous the men of electrical importance in its councils,—the greater will be the triumph of the Society, the more far-reaching and enduring the beneficial results of its work; for—

Beyond the power of doubt of the greatest doubter born, is established the fact that the Jovian Order, heart and soul, hand and sinew, labored last year to the glory of that greatest of all trade movements, "Electrical Prosperity Week," and gave renewed effort this year in the return engagement, "America's Electrical Week."

If they desired to be only selfish, we would urge those interested in the Society's welfare to join the enthusiastic thousands that have earlier realized the fundamental merit in Jovianism.

If they desired to be only consistent with the principle of co-operation upon which the Society is founded, we would urge it.

The industry needs the Jovian Order as it need the Society. Truly it would live without either or both, but it would not live as well.

In its final analysis the Society represents the great motive force that spreads broadcast throughout the land, in every conceivable fashion, the ideas, plans, propaganda that need but the spark of local co-operation to turn them into gold. It is the gigantic advertising, publicity, sales-promotion factor.

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The Jovian Order is the sales staff. It supplies the local spark. It capitalizes in hundreds of towns and cities the national work of the Society. It ties in the cumulative force of the general campaign with local stimulation and rings the cash registers.

It has been said by some who were passive in Jovianism that they needed to be convinced of a serious, tangible purpose in it before lending their support.

That purpose has always been with the Order, but now is so evident that no longer can it be denied.

This is not a defense of Jovianism. The Order requires no brief of justification, for it is stronger today than ever in its history, and is gaining in power each day.

This is a plain statement as to WHY EVERY ONE IN THE ELECTRICAL INDUSTRY, and particularly Society members, should return good for good and assist the Jovian Order in its local and national organization and work in every possible manner.

* * * *

MEETING OF ELECTRIC RANGE COMMITTEE OF N. E. L. A. AT ST. LOUIS

REPRESENTATIVES of the Electric Range Committee, N. E. L. A., held an important meeting in St. Louis, November 27-28, under the auspices of the Union Electric Light & Power Company of that city. Statements of the members of a committee appointed to make suggestions on the various phases of the development and sale of electric ranges were read.

The subjects embraced and the chairmen of the committees to whom they were assigned were as follows: Technical, H. Jalonick, Po. 1255, Texas Light & Power Company, Dallas, Texas; Co-operation between Manufacturers and Central Stations, H. E. Young, Po. 8242, General Electric Company, Minneapolis; Impediments to more general Introduction of Electric Ranges from Manufacturers Standpoint, C. E. Michel, Po. 9061, Union Electric Light & Power Company, St. Louis; Co-operation from Central Station Standpoint, R. B. Snyder, Milwaukee; Information on Successful Sales Efforts and Commercial Recommendations, H. A. Brooks, Po. 12930, Washington, D. C.; Standardization of Range, C. E. Greenwood, Boston.

Reports will be prepared by the various committees and submitted to chairman of the commercial section, Ernest A. Edkins, Po. 13130, Commonwealth Edison Company, Chicago.

A committee on national co-operative advertising was appointed with George H. Hughes, Po. 7228, chairman.

Among the prominent members in attendance were A. Jackson Marshall, Po. 663, secretary, Electric Vehicle Association, New York; J. F. Killeen, Po. 5526, Fourteenth Mars, General Electric Company, Pittsfield; H. H. Russell, Po. 2529, electric heating engineer, Dallas, Texas.

* * * *

EXPOSITION HELD AT LOUISVILLE DURING AMERICA'S ELECTRICAL WEEK

THE EXPOSITION held in the armory at Louisville, Kentucky, during "America's Electrical Week," proved to be an exceptionally successful one from many standpoints. Nearly 300 concerns were represented by exhibits, and the attendance was estimated at 85,000.

Among other interesting features was the old generator used at the Great Southern Exposition held in Louisville in 1884. This old machine was in working order and when attached to a concealed motor produced about as much light as it did when new.

The Louisville Gas & Electric Company showed equipment in use on the company's cars in 1890.

Robert Montgomery, Po. 6147, Statesman-at-Large, chairman of the Jovian League, Paul Tafel, Po. 13337, Statesman for Kentucky, and Frank H. Miller, Po. 16670, superintendent of motive power, Louisville Railway Company, were active in organizing and directing the exposition.

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THOMAS A. EDISON, Honorary, and CHARLES P. STEINMETZ, Honorary, both of whom have accepted appointments as Vice-Chairmen on the "One Hundred Point Committee" of the Jovian Order

* * * *

A "WHITE WAY" ERECTED AT WACO, TEXAS, BY POPULAR SUBSCRIPTION

The Young Men's Business League, of Waco, Texas, is responsible for the "White Way" recently erected in that city. In a movement which the organization inaugurated, the funds for the installation of the "White Way" were raised by popular subscription. The illumination consists of forty-eight ornamental standards each carrying three 100 candle power units. The city has provided for the maintenance of the white way, including the renewal and replacement of lamps.

Write a Jovian Song

The B. H. Stief Jewelry Co.

offers a handsome piece of Jewelry for the best Jovian Song, to be selected by

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All Jovians are eligible to participate in the contest. Submit your songs, either with or without music to

JOVIAN ORDER
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Building a Career

(continued from page seven)

Michelangelos, Napoleons, Gladstones and Joans of Arc. There is no pleasanter duty or privilege than to worship at the shrine of history's heroes and heroines, and to dream into their illustrious careers an idealism of achievement over and above the capabilities of the boys and girls of our own day. But since I disavow the cynicism that derides the present and idealizes the past, I choose to turn sharply to the task you have assigned me and endeavor to find in the iridescent, lightly floating bubbles of our joyous life not only the bouyant atmosphere of today but also the prosaic, career building soapstone of the past.

Building a career in 1916! How may it be done? What are the specifications?

Suppose we name as our first consideration the selection of our ancestors.

Out on the Pacific coast a great lover of nature—Luther Burbank—is constantly producing new vegetable and floral wonders. The products of his gardens suggest the magic of an occult world. Yet of magic there is none. He has laid hold of the well known Mendelian principle that certain characteristics of plant life are transmitted without change. One flower may have the persistent characteristic of height; another that of color; another that of delicious perfume. By cross fertilizing, and with endless toil there comes at last the long sought new creation—tall, beautiful and with wondrous odor. Just so may a career be built. Diligently and faithfully cross fertilize the virgin qualities you find in the lives of great men and women, and who may estimate the heights to which the youth in the future may arise?

The Burbank process is undoubtedly as certain with human beings as with plants, and posterity will no doubt amply reward the faithful advocates of eugenics who are content to look down upon the fruits of their labors from the ethereal remoteness beyond the River Styx.*

But may not the same result in a considerable measure be achieved within the narrow confines of a single generation? I think it may. Just as a gardener grafts a budding twig of fine variety into the body of a tree of lesser virtue and attains some partial measure of the Burbank results, so may the virtues of one human stock be fed, by emulation and by constant association, into the system of another.

Try thus compounding two or more of the following underlying fundamentals of human eminence:

The Christian simplicity and nobility of Abraham Lincoln;
The driving force of Theodore Roosevelt;
The careful preparedness of Lord Kitchener;
The love of humanity of Florence Nightingale;
The self-denial of Count Leo Tolstoi;
The patient industry of Thomas A. Edison;
The intellectual hunger of Mary Anton;
The virgin honesty of Edward Everett Hale;
The idealism of Ralph Waldo Emerson;
The Christian charity of Savonarola;

and you will bring from the crucible a man or woman to whom will be granted in the course of human events a real career. Have you not great faith that in every human being an all wise Providence has implanted at least one virtue? There is many a Mrs. Wiggs of the Cabbage Patch, surrounded by squalor but possessed of a soul as radiant as the sunshine. The thief who steals your purse loves his crippled child with the passion of a sainted mother. The little urchin newsboy has the seraphic gift of song of an angel. The poverty stricken widow, surrounded by hungry children, has the rugged honesty of John Calvin. *With but one virtue, is there not the foundation upon which to construct a career contributing to the welfare of the human race?*

Having disposed of the vital consideration of ancestry, what next in the process of building a career in this year of 1916?

Deny emphatically and with self-conviction that all opportunity was of the past.

Do you hesitate to do so?

Who perhaps above all others saved France in the titanic struggle across the seas? Two obscure Ohio brothers—Wilbur and Orville Wright—who had the inspiration of the aeroplane, and unaided brought it to such perfection that the Waterloo of Napoleon has been impossible in the great world war of today.

Whose name will go ringing down in history as the engineer of indelible fame who bi-sected this hemisphere with the Panama Canal? Major-General G. W. Goethals—a man whose identity was unknown to the Britannica Encyclopaedia of 1911 and to whom the Century Dictionary of my library gives not the slightest clue.

Deny also that thorough preparation no longer holds as it did in the past, but that chance rules the destiny of today.

Who made possible the first effective transmission of the human voice from the Atlantic to the Pacific? A college professor, advanced by virtue of his careful preparation and brilliant self-development, to the head of a great department in a great university. How did Dr. Pupin achieve this marvelous thing? He wrung the practical answer from the cold, hard processes of mathematical computation and not from the chance good fortune of random experiment.

Who gave to our day its most startling revelation of Nature's marvelous hidden energy? Madam Marie Curie—a quiet woman of a nation not accustomed to feminine leadership in this generation, a woman persistent and carefully schooled in the systematic processes of the chemical laboratory, who wrested from great quantities of earth by infinite toil, that first small quantity of radium which still constitutes one of the wonders of our time.

Also deny that fortune and fame no longer come to the son of toil, but are reserved to the favored progeny of the idle rich.

Whose restless, creative mind is actually bringing a social and political revolution to staid, self-contained old England? A man who has risen from lowly station in the mining districts of Wales. Who dares to place a limit to the part David Lloyd-George may play in breaking down the social and political traditions of centuries and building up an empire behind which the England of yesterday and today will pass into complete eclipse?

Whose sayings of childhood have been the joy of your little ones and of mine; have immortalized "The Raggedy Man," and painted upon the imperishable canvas of time your memories of "The Ole Swimmin' Hole"? An itinerant minstrel and sign painter —James Whitcomb Riley—in honor of whom our whole nation so very recently bowed its head in reverent and grateful tribute.

Deny also that self-sacrifice and devotion to high ideals has gone down in our maelstrom of self-indulgence.

Would you, after having acquired a degree of learning and professional skill certain to bring you great eminence in any cosmopolitan center of the whole globe, choose to go among the ignorant, impoverished, degenerating population of Labrador, and prompted only by your love of the Great Master and your fellow man, give your life to the regeneration of these people? Yet Dr. Wilfred Thomason Grenfell has done so and the results have been astounding. A new hope is coming to a forgotten race, and fame throughout the world according itself to this wonderful and self-sacrificing man.

Would you, possessed of intellectual strength, beauty of character, normal prospects of success in life, and physical vigor, choose to devote your whole being to the education of a little child devoid of sight, hearing and speech? Yet a woman of these gifts—Mrs. John A. Macy—has done so and from the magic of her touch there has blossomed a marvel of intellectual and moral power—Helen Keller—whose attainments have given a new hope to the helpless in all lands.

Having denied these platitudinous defenses of the ne'er-do-well, re-assert and diligently practice the cardinal principles that have heretofore guided the lowly to high station, the weak to the exercise of vast power, and the ignorant to intellectual leadership, and you will, with certainty, build a career. *But exercise a care lest you pass, without recognition, the very goal you seek.*

*(See Appendix.)

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A career is a structure which does not build itself, nor does it have its foundation in the clouds and its pinnacle in the earth. It has an architecture as varied as the fancy of man, and the materials of its construction are as convenient to the hand as the sands of the earth. Its decorations are not essentially of gold and silver, but preferably of the humbler substance of human achievement. It does not of necessity rise to an elevation obscuring the less eminent human structures adjoining it. It does not close its doors to the lowly, nor to the traveler drenched in the rains of adversity. It welcomes into the warming atmosphere of its spacious halls men of all types in whose veins flows the blood of real character, having red corpuscles of ambition and white corpuscles fighting down the poisons of degeneration. On its walls are the heroic portraits of a rugged ancestry, and gracing its hallways is the traditional armour of courage. Upon its floors are the soft carpetings of becoming modesty, and looking down from the vaulted heights of its surmounting dome is the inspiring effigy of the lowly Nazarene. Across the threshold as you enter is the motto—

BE THOU A MAN.

* *

APPENDIX

Influence of Heredity

Do you doubt the persistence of human characteristics?

One of the great names in the intellectual and religious history of our country is that of Jonathan Edwards, who died in 1758 while occupying the presidency of Princeton University. Of his descendants 1394 have been identified and carefully charted. What, do you think, has been their share in the upbuilding of our national life? It has indeed been an astonishing record of achievement, as the following tabulation discloses:

295 were college graduates;
13 were presidents of colleges;
65 were professors in colleges;
60 were physicians, many of whom were eminent;
More than 100 were religious leaders;
75 were officers in the army and navy;
60 were prominent authors and writers;
More than 100 were lawyers of whom 30 were judges;
80 held public office, of whom
1 was Vice-President,
3 United States Senators;
Several were governors, members of Congress, etc.
15 were managers of large industrial enterprises.

On the other side of the picture, one of the notorious names in the annals of this country is that of Jukes, a lazy and irresponsible fisherman born in 1720. In five generations the "Jukes" family numbered about 1200 idle, ignorant, lewd, vicious, pauper, diseased, imbecile, insane and criminal specimens of humanity. Of these:

300 died in infancy;

Of the remaining 900—

310 were professional paupers in almshouses;
440 were physically wrecked because of their own wickedness;
More than half the women were prostitutes;
130 were convicted criminals;
60 were habitual thieves;
7 were murderers;
Not one had even a common school education;
Only 20 learned a trade and ten of them learned it in state prison.

Do you wonder that Darwin wrote long ago:

"Except in the case of man himself, hardly anyone is so ignorant as to allow his worst animals to breed"?

Lest these two instances of persistent heredity not suffice to convince you of the importance of proper ancestry as the most conspicuous, easy road to a career, let me cite one more instance of family history.

E. W. DONOHO, Po. 6049, Congressman Tenth District, of Landers-Frary Clark Company, Chicago. Congressman Donoho needs no introduction to the Jovians in his home territory. His activity in Jovian affairs and the results he has obtained have extended his acquaintance both in the fraternity and the electrical industry

Martin Kallikak (so called) was a soldier in our Revolutionary Army. He came of honorable and upright ancestry, and was himself normal minded and non-criminal. At one of the taverns frequented by the militia he met a feeble-minded girl by whom he became the father of a feeble-minded son. Closing the door to this escapade behind him, he later married a respectable girl of good family. His descendants through the two women have been carefully charted, and what do you think is the result?

On the legitimate side, his direct descendants numbered at last accounting, 496 persons. All of them are normal, and only three were somewhat degenerate. These 496 have scattered all over the United States, and are prominent in their communities wherever they have gone. There are no illegitimate children, no immoral women and no feeble minded.

On the illegitimate side, his direct descendents numbered, at last accounting, 480 persons. Only nine per cent of them have been found to be normal;

29 per cent have been feeble minded as was their maternal ancestor;
36 descendants have been illegitimate;
33 were sexually immoral;
24 were confirmed alcoholics;
3 were epileptics;
82 died in infancy.

* * * *

NEW ELECTRIC COMPANY INCORPORATED

Articles of incorporation have been filed in New York by the Northern Ohio Electric Corporation. The new company has a capital stock of $6,375,000. It proposes to deal in shares, stocks, bonds, etc., and to promote and finance railroads, gas, steam and hydro-electric light and power plants. The incorporators are George E. Hardy, John C. Weadock and Jacob Heckma, of New York, N. Y.

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Personal Pointers

Here in these pages recorded,
A line from some one you may know
From some one who may be rewarded
For the punch he has put in his blow.
Or maybe some place in the changes,
That pass in their infinite trend,
You'll find where the reading arranges
The name of a brother or friend.

* * * *

H. A. Joslin, Po. 4560, city electrician, Seattle, Wash., has been appointed local manager of the Oregon Power Company at Eugene, Ore.

* * * *

N. M. Hope, Po. 7398, is now associated with the McFell Electric Company, San Francisco. He was formerly with the Turner Company of that city.

* * * *

D. E. Harris, Po. 1757, for many years district sales manager for the Pacific States Electric Company, was recently elected vice-president of that company.

* * * *

I. L. Capps, Po. 7384, formerly with the Pacific States Electric Company, is now connected with the sales force of the Studebaker Automobile Company at San Francisco.

* * * *

F. A. Tennant, Po. 15546, formerly line foreman for the Orlean (Pa.) Electric Light & Power Company, was recently promoted to the position of general superintendent of the plant.

* * * *

M. J. Fogarty, Po. 10817, who was formerly superintendent of the Orlean Electric Light & Power Company, Orlean, Pa., is now superintendent of the Erie (Pa.) Lighting Company.

* * * *

Edward Wray, Po. 7209, who until recently was manager of the Railway Electrical Engineer, has resigned from that position to become associated with the Sangamo Electric Company of Springfield, Ill.

* * * *

John L. Carlisle, Po. 2133, formerly chief inspector, Commonwealth Power Company, Milwaukee, Wis., is now connected with the sales department of the Laclede-Christy Clay Products Company, St. Louis.

* * * *

John Hunter, Po. 7016, chief engineer, Union Electric Light & Power Company of St. Louis, has been selected as a successor to the late A. C. Einstein as a member of the board of directors of that company.

* * * *

W. T. Kyle, Po. 4926, is now sales agent of the Copperweld, copper-clad steel-wire department of the New York office of the Page Woven Wire Fence Company. He was formerly with Okonite Company.

* * * *

E. J. Wallis, Po. 4487, was recently promoted from the position of southern district manager at Atlanta, Ga., to western district manager with headquarters at San Francisco by the Western Electric Company.

F. H. Leggett, Po. 9379, Pacific Coast representative, Western Electric, will return to the executive offices of the company at New York, January 1. He has been in charge of the San Francisco office for the past three years.

* * * *

Day Baker, Po. 7985, recently resigned as New England representative for the General Vehicle Company. He has been prominently identified with electric-vehicle promotion in New England States for several years.

* * * *

F. B. Gleason, Po. 1265, has been appointed southern district representative with headquarters at Atlanta, Ga., to succeed E. J. Wallis, Po. 4487, by the Western Electric Company. He recently represented the company in Japan.

* * * *

W. G. Gordon, Po. 16948, recently joined the sales force of the Pacific States Electric Company, in charge of the lamp department, at San Francisco. He was formerly with the Edison Lamp Works of the General Electric Company.

* * * *

William Mueller, Po. 10975, formerly manager of the pole department of the Western Electric Company at Chicago, is now connected with B. J. Carney & Company, 1729 McCormick Building, Chicago, as sales representative.

* * * *

Gus H. Cohn, Po. 6630, was recently changed from the Kansas City territory to the general office of the Wesco Supply Company at St. Louis, and promoted to the position of district sales manager. He has been with the company for five years.

* * * *

W. L. Miller, Po. 18421, manager of the Interstate Light & Power Company, Galena, Ill., was recently elected secretary of the Good Roads Club, an organization whose purpose is the improvement and maintenance of good roads in the Galena district.

* * * *

Warren B. Hadley, Po. 6887, who has been assistant electrical engineer for the District of Columbia since 1913, was recently appointed electrical engineer, succeeding Walter B. Allen, who was appointed secretary to the Public Utilities Commission.

* * * *

P. H. Bailey, Po. 13347, is now sales manager for the Moorhead Knitting Company, Harrisburg, Pa. He was until recently commercial manager of the Harrisburg Light & Power Company, from which company he resigned to accept his present position.

* * * *

R. B. McClain, Po. 5253, formerly inspector of the Underwriters' Association of Erie, Pa., is now salesman for the Star Electrical Company, electrical jobbers of Erie. Jovian McClain was connected with the Underwriters' Association for a number of years.

* * * *

Leander Parrish, Po. 5035, representative of the Tower-Binford Electric & Manufacturing Company, Durham, N. C., was married November 7, to Mrs. Ada Preston Shearhouse. The wedding took place at Durham, where the couple will make their home.

* * * *

W. Edgar Sawyer, Po. 15564, who resigned from the managership of the San Francisco office of the Kelly-Koett Manufacturing Company, to complete a course of engineering in the University of Tennessee, is now connected with the Western Electric at Kansas City.

* * * *

J. W. Bryant, Jr., Po. 15460, who has been associated with the Syracuse office of the Wagner Electric & Manufacturing Company

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for the past eleven years, has just been transferred to Cincinnati and made district manager at that point, with headquarters at 1620 First National Bank building.

* * * *

WM. G. MEROWIT, Po. 10463, was recently transferred from the Milwaukee factories of the Cutler-Hammer Manufacturing to the New York City office of that company and made representative for the company's line of control apparatus in the state of New York and in Canada.

* * * *

O. W. JONES, Po. 17164, who has been connected with the Columbus (Ohio) Railway, Power & Light Company, as superintendent of the meter and distribution department, has resigned to accept a position in the commercial department of the Texas Power & Light Company, at Dallas, Tex.

* * * *

A. B. BETTIS, Po. 18902, has been promoted to the position of superintendent of engineering and construction from that of chief civil and mechanical engineer by the Kansas City Light & Power Company. His new position also entails supervision over the Kansas City Heating Company's mechanical division.

* * * *

W. R. PUTNAM, Po. 10984, who was formerly general superintendent of the Wisconsin-Minnesota Light & Power Company, has been appointed manager of the Salt Lake Division of the Utah Power & Light Company. This combines the duties of the position as manager with those of general sales manager for the company.

* * * *

GEORGE F. MORRISON, Po. 11992, general manager of the Edison Lamp Works of the General Electric Company, was recently elected vice-president of that company. He has been connected with the Edison plant at Harrison, N. J., since 1882, and has filled practically every position from office boy to general manager.

* * * *

GLEN WILSON, Po. 3662, recently resigned from the Cutler-Hammer Manufacturing Company, with which he has been connected for the past seven years, to accept a position with the Franklin Electric Manufacturing Company of Hartford, Conn. He will represent the Franklin Company in Western New York, with headquarters at Buffalo.

* * * *

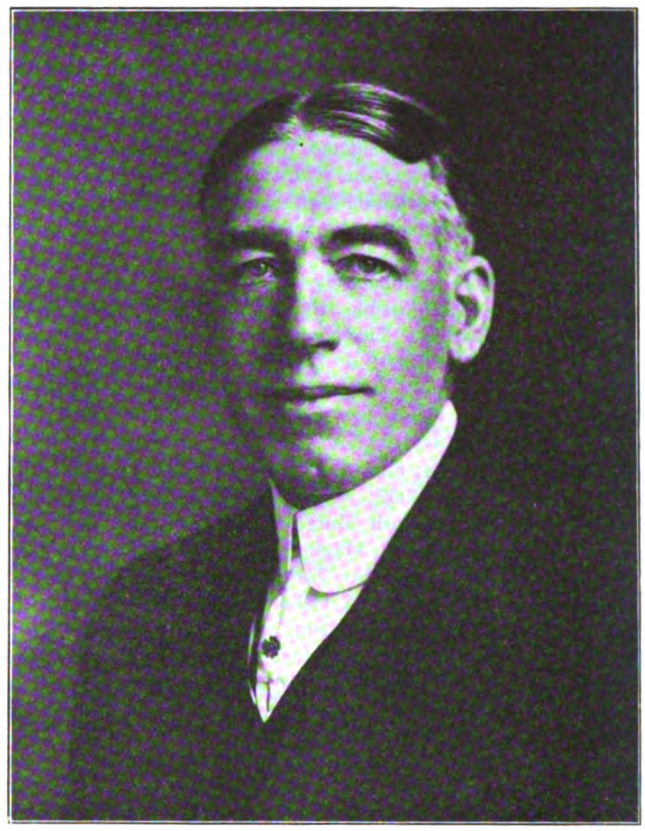
DONALD MCDONALD, Po. 13317, vice-president and general manager, Louisville Gas & Electric Company, in addressing the annual convention of the Kentucky Fire Underwriters' Association at Louisville, made a suggestion that if it were made impossible for a man to insure his property so that he would profit by its destruction that the tremendous fire waste of the country would be materially reduced.

* * * *

CHARLES S. RUFFNER, Po. 9955, was elected vice-president of the Union Electric Company of St. Louis, to succeed A. C. Einstein, Po. 5760, an account of whose death was given in the last issue of The JOVIAN. For a number of years he was vice-president and general manager of the Electric Company of Missouri, which has control of the electric service of St. Louis County. He is 36 years old, and is a graduate of the University of Missouri.

* * * *

EDWARD W. P. SMITH, Po. 14580, who has been city electrician for the City of Cleveland for the past three years, has resigned to accept a position as consulting engineer with the Elliott Electric Company, 322 Champlain Avenue, Cleveland. He will assume his new duties January 1. Jovian Smith is chairman of the Cleveland Section of the American Institute of Electrical Engineers and a member of the Chamber of Commerce.



HENRY F. HOLLAND, Po. 1446, manager electric range department, Great Western Power Company, San Francisco. Until recently he was Pacific Coast representative of the Simplex Electric Company of Cambridge, Mass., from which position he resigned to go with the Great Western Power Company. In his new position he will devote his time to the development of the domestic cooking load. His headquarters are at 511 Sutter Street, San Francisco

H. H. MAGDSICK, Po. 8910, of the engineering department of the National Lamp Works of the General Electric Company, has taken an important part in the work of flood-lighting the Statue of Liberty. He had charge of the illuminating design. He prepared plans and specifications for the flood-lighting and for changes in the torch that has made possible the wonderful effect of making it appear a live flame. Besides giving his best efforts to the details of the work of lighting the statue he supervised the installation of the 250 flood-lighting units.

* * * *

DR. ELIHU THOMSON, Honorary, was the recipient of the John Fritz Medal, at a presentation made at Central Lecture Hall, of the Massachusetts Institute of Technology, Boston, December 8. The medal was awarded Dr. Thomson for achievements in electrical invention, in electrical engineering, in industrial development and in scientific research. Dr. Thomson is one of the founders of the Thomson-Houston Company, the predecessor of the General Electric Company. He is president of the American Institute of Electrical Engineers, and is noted for his experimental work in alternating current induction and the invention of electrical apparatus.

* * * *

RAY P. LEE, Po. 17475, who has been president of The W. R. Garton Company, manufacturers and jobbers of electrical specialties, Chicago, since 1907, will head a reorganization of that company January 1. The title of the new company will be Electrical Material Company, and will take over the business of the W.R.Garton Company at 11 and 17 South Desplaines Street. Elijah Lewis, Po. 10083, sales representative in the Iowa district will be vice-president of the new company.

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"ONE HUNDRED POINT COMMITTEE"

PROBABLY no committee of the Jovian Order in recent years has attracted so much attention as the "One Hundred Point Committee" of which Martin J. Wolf, Po. 6027V, is general chairman. When it is considered that the purpose of the committee is to interview every one who is or ever has been a member of the Order, and the amount of effort required to interview them intelligently and effectively, the magnitude of the task becomes apparent.

Chairman Wolf immediately proceeded to round up as much assistance as possible in the following vice-chairmen and division chairmen. Vice-chairmen: Fred Bissell, Po. 529; John A. Britton, Po. 7380; J. Robert Crouse, Po. 260-8V, Past Jupiter Seven; Henry L. Doherty, Po. 3208-33, Reigning Jupiter; Thomas A. Edison, Honorary; Ernest Freeman, Po. 7178; John F. Gilchrist, Po. 3219-34; A. A. Gray, Po. 2271; C. W. Hobson, Po. 1, Past Jupiter One; Sam A. Hobson, Po. 3, Past Jupiter Three; W. H. Johnson, Po. 14952; S. M. Kennedy, Po. 17072; W. A. Layman, Po. 1166, Seventh Mars; W. W. Low, Po. 291; T. C. Martin, Honorary; W. N. Matthews, Po. 496-44V, Past Jupiter Twelve; Ernest McCleary, Po. 7314; Jas. H. McGraw, Po. 9865; J. E. Montague, Po. 499; L. A. Osborne, Po. 3250-36; W. E. Robertson, Po. 424-6V, Past Jupiter Six; E. W. Rockafellow, Po. 5407; Robley S. Stearns, Po. 1501, Thirteenth Apollo; Charles P. Steinmetz, Honorary; J. F. Strickland, Po. 30, Third Hercules; Gerard Swope, Po. 16243; G. E. Tripp, Po. 143; Herbert A. Wagner, Po. 10371, and Arthur Williams, Po. 1917.

The chairman of the various divisions as outlined by General Chairman Wolf, are as follows: Eastern Division: Jas. H. Betts, Po. 2765, Fourteenth Vulcan; Wm. A. Burckhard, Po. 1939, Fifteenth Hercules; Wm. Gloeckner, Po. 2370V, Fifteenth Pluto; P. S. Klees, Po. 413, Fifteenth Mars, and J. A. Pollock, Po. 18675, Fifteenth Vulcan. Central Division: W. J. Doherty, Po. 2918V, Thirteenth Chiron; E. W. Donoho, Po. 6049, Fifteenth Argus, and W. J. Trott, Po. 2685, Fifteenth Triton. Western Division: T. E. Collins, Po. 9327, Fifteenth Comus, and J. I. Colwell, Po. 11229, Fifteenth Amphion. Southern Division: W. R. Herstein, Po. 765, Thirteenth Avrenim; C. D. Cabaniss, Po. 4453, and J. E. Cowles, Po. 1549, Fifteenth Apollo. Rocky Mountain Division: J. E. Greenawalt, Po. 2308, Fifteenth Atlas. Southwestern Division: Fred Johnson, Po. 177V; J. E. Cowles, Po. 4453, Fifteenth Apollo, and E. F. Hail, Po. 1924, Fifteenth Neptune.

The committee now numbers 673 members, including the vice-chairmen, division chairmen and the chairmen and committees of the different states and cities. A complete review of the splendid work of the "One Hundred Point Committee" will be given in The JOVIAN when its campaign is completed.

* * * *

AMERICA'S ELECTRICAL WEEK

REPORTS from Jovian Leagues in a great many cities tell the story of how heartily the "Electrical Week" movement was entered into this year and how much was accomplished. From one fact, alone, a fair idea of the success of the celebration may be gathered. Forty-six electrical shows were held during the week. In a number of other cities and towns where no regular electrical shows were attempted special window displays and exhibits were made by many concerns handling electrical appliances and apparatus. Parades were features at some points as were also electrical demonstrations, and many new and novel features for arousing interest were put into effect. In fact, the co-operative efforts of Jovian Leagues in each city were directed towards aiding the Society for Electrical Development and the industry in demonstrating the value of electricity in the manner best suited to the locality.

To go into details and give an account of the proceedings in full would require far more space than is available in The JOVIAN. For instance, the demonstration and parade attending the inauguration of the flood-lighting of the Statue of Liberty, in which President Wilson, Chauncey M. Depew, Ambassador Jules J. Jusserand and Jupiter Henry L. Doherty participated, alone contains enough matter of interest to fill several pages.

At Wichita, Kan., the amount of enthusiasm aroused by the electrical show held at the Forum, surpassed by far the interest taken in electrical demonstrations in the past.

New Orleans had a big celebration in connection with the flood-lighting of the Statue of General Robert E. Lee. There was some movement of interest in connection with the week in nearly every city, north, east, west and south, and in the central section.

Taken as a whole although it is too early for official statistics at this writing, it is safe to say that "America's Electrical Week" was far more successful than the celebration held last year; which is saying a good deal.

OBITUARY

H. D. BROWNE, Po. 7144, who was general purchasing agent for the Northern Electric Company at Montreal, Can., until he enlisted for service at the front in Europe, was killed in action July 18, 1916. At the time of his death, Jovian Browne was Lieutenant of the 60th Canadian Overseas Battalion. He had been a Jovian since June 22, 1912, having been initiated at the Rejuvenation held in Montreal on that date. No more fitting tribute to his memory could be given than that contained in a paragraph of a letter of the member informing The JOVIAN of his death, which reads: "Of all the splendid characters in the list of those who are Jovians in Canada, I think that Jovian Browne was one of the most lovable."

* * * *

JOHN T. BRADY, Po. 3194, treasurer of the Denver Gas & Electric Company, died at Colorado Springs, November 21, following a general breakdown of his health which occured three years ago. He was widely known in Denver business circles, having taken an active part in the work of the commercial associations and in civic movements. In fact his recent illness was attributed largely to overwork in connection with a strenuous campaign for new members for one of the civic bodies in which he participated. His death came at a time when he appeared to be recovering. Jovian Brady was forty years old and is survived by his father, a son, and a sister, Mrs. M. B. Waldron, to whom The JOVIAN extends the sympathy and condolences of the fraternity.

J. F. BOWMAN, Po. 10390, died at Pittsfield, Mass., December 10, from injuries sustained in an automobile accident which occurred between Pittsfield and Albany, N. Y., on Friday, December 8, caused by his machine skidding. Jovian Bowman was a member of Company F, Massachusetts National Guard and had recently returned from service at the border. At the time of his death he was employed at the Pittsfield Works of the General Electric Company, where he had many warm friends. He is survived by his mother and a brother to whom The JOVIAN extends the sympathy and condolences of the Order.

* * * *

GEORGE S. HALEY, Po. 1141, president of the General Engineering & Management Corporation of New York City, died at Roosevelt Hospital, New York City, on December 3, after being struck by a taxicab. The accident occurred when Jovian Haley was returning from a banquet at the Waldorf Astoria given to celebrate the flood-lighting of the Statue of Liberty. Previous to his affiliation with the General Engineering & Management Corporation, he was vice-president of the Texas Power & Light Company with headquarters at Dallas, Texas, a position he had held from 1912 until his resignation last June to go with the New York company. He had been a Jovian for over nine years, having been initiated at a Rejuvenation held at St. Albans, Vt., September, 1907. He was well known in electrical business circles in New York and had a host of friends who were shocked at his tragic death.

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CHARTERED LEAGUES

Cincinnati has applied for Jovian Charter . . No. 1

Kansas City, Missouri, has applied for Jovian Charter . . . . . No. 2

Pittsburgh has applied for Jovian Charter . . No. 3

Minneapolis has applied for Jovian Charter . . No. 4

More Are Coming!!!

JOVIAN "GET TOGETHER" DINNER AT BUFFALO

BUFFALO Jovians enjoyed a dinner given by the League on the evening of December 2, that proved to be one of the most delightful affairs the local fraternity has held for some time. The dinner was given as part of the program connected with "America's Electrical Week" celebration, and brought together eighty-five members, numbered among whom were some of the most prominent members of the Order.

Frank A. Coupal, Po. 584V, officiated as toastmaster of the occasion. He gave an outline of the work the Jovian League had done to make "America's Electrical Week" a success, and also made some pointed remarks showing the benefit to the League of close relationship to the Jovian Organization.

At the conclusion of his address he introduced Martin J. Wolf, Po. 6027V, Fifteenth Ajax, general chairman of the "One Hundred Point Committee," with an announcement that Congressman Wolf would make clear what the Jovian Order intended to do during the coming year.

In his address Jovian Wolf outlined the movements now being put into effect, and gave a comprehensive review of the plans for bringing the Leagues into closer unity with the Jovian Order.

Following his address, W. E. Robertson, Po. 424-6V, Past Jupiter Six, was called on for an address. After reciting some of the work done by the Buffalo League during the past, he urged the members to give every assistance possible to aid in the work the Order is doing, suggesting that a prompt payment of dues was essential to finance and advance the undertakings proposed.

Upon a suggestion by Chairman Coupal, a vote was put to ascertain how many would support the Jovian Order and pay their dues promptly. The agreement to do so was unanimous.

A vote was then taken for the election of Tribunes. John H. Burns, Po. 870, sales manager, McCarthy Bros. & Ford, was elected First Tribune and W. R. Huntley, Po. 487, vice-president and general manager, Buffalo Gas & Electric Company, Second Tribune.

Among those present were: J. D. Robertson, Po. 595, president, Robertson Cataract Company; E. D. McCarthy, Po. 589-10, president, McCarthy Bros. & Ford; C. S. Sidway, Po. 515, and Louis F. Philo, Po. 774.

According to reports Jovian Philo deserves special mention for his activities in aiding to make the affair the delightful one it proved to be.

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AN EXAMPLE SHOWING THE VALUE OF JOVIAN LEAGUES PARTICIPATING IN CIVIC ACTIVITIES

THE VALUE of the influence of Jovian Leagues both to the electrical industry and in civic matters of importance was again demonstrated, this time at Kansas City, in the political movement to jam a municipal light plant bond issue through without making investigations as to either its cost or feasibility. In that city there was recently formed a Public Improvement Club, composed of the presidents of the industrial and civic organizations. P. Lloyd Lewis, Po. 6018, president of the Kansas City Jovian League, is a member, and represents the electrical interests. When the question of endorsing the movement to build a municipal electric light plant was brought before the body, Jovian Lewis voiced the only opposition to the project. He advised that a committee be appointed to make a thorough investigation of costs and feasibility of the undertaking before legislation was enacted to provide for it. In this he was successful, thwarting the movement of local politicians to rush through an amendment that would probably have proved a joker to the city.

By paving the way for participation in movements of this nature Jovian Leagues are rendering valuable service in many cities, not only by protecting investments against political aggression, but also by saving municipalities from costly blunders.

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NASHVILLE LEAGUE'S ACTIVITY IN CONNECTION WITH THE SAFETY MOVEMENT

UNITING efforts with the Safety Council of Nashville, the Jovian League got behind the safety movement in that city in a manner that brought its members into prominence before the public and gave them a great deal of publicity in the local papers.

The efforts of the League were directed particularly towards making the parade held on the evening of December 4, the greatest ever attempted in the city. An idea of how well they succeeded can be understood from the fact that it required two hours to pass a point on the route taken. There were more than five hundred trucks and fifty street cars in line.

Once the value of the movement was understood the Nashville press took up the matter giving it wide publicity and urging the people of the city to give the Jovian League and Safety Council every assistance possible to make the demonstration a success.

The following members of the Nashville League made up the committee in charge of the safety movement: J. A. Cayce, Po. 2416; R. C. Leonard, Po. 6865; J. P. Lawrence, Po. 1825, and C. P. Cochrane, Po. 15212.

In commenting editorially on the work done by the Jovian League to promote and carry out the movement the Nashville Tennesseean said in part: "It is to be hoped that every citizen in Nashville will join with the Jovians in the grand work they are doing for the city." * * * * "For it was the Jovian Order that first conceived the 'Safety First' Council for Nashville." Nashville Banner: "The Jovian League had an attractive float, brilliantly illuminated, on which was the 'Grim Reaper'." These and a great many other allusions to the movement tell the story of how successful it was.

A great deal of credit is due the Nashville League for their activities both in civic matters and in those pertaining to the work of the Order and the electrical industry.

* * * *

WINNIPEG REJUVENATION

TEN CANDIDATES were initiated at the Rejuvenation held at Winnipeg, Manitoba, November 7. The Rejuvenation and Joviation were held at the Alexandria Hotel and were attended by 43 members of the Order. This was the second Rejuvenation of the year.

Following is the Degree Team that officiated: J. H. Schumacher, Po. 4742, Jupiter; Harry T. Allen, Po. 8960, Neptune; T. L. Phillips, Po. 15962, Pluto; J. A. Cayle, Po. 12883, Vulcan; W. T. Minty Po. 15960, Mercury; J. B. Minns, Po. 8983, Hercules; L. B. Baker, Po. 12849, Mars; P. L. Charles, Po. 5981, Apollo; W. M. Houston, Po. 5995, Avrenim.

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ST. LOUIS LEAGUE JUBILEE AND DANCE

ON THE evening of December 8, the St. Louis League gave what the committee in charge termed a "Jubilee and Ball" to members of the fraternity and their families at the Mercantile Club. The affair was a fitting climax to celebrate the activities of "America's Electrical Week."

The entire fourth and fifth floor of the Mercantile Club rooms which had been turned over to the committees were beautifully decorated for the occasion. In addition to the provision for dancing, card tables had been arranged both in the ladies' parlors and the gentlemen's smoking rooms. Also in addition to the orchestra in the ball room, a ladies' orchestra discoursed music for those who preferred to participate in the card games.

Indulgence in the dancing and games was interrupted at 10:30 and luncheon served, lasting until 11:30. After the luncheon the amusements were continued until 1:00 o'clock, at which time the strains of "Home, Sweet Home" brought to its conclusion an enjoyable evening.

The following committees deserve much credit for their efforts in arranging and conducting the affair. America's Electrical Week Committee of the St. Louis Jovian League of Electrical Interests: F. D. Beardslee, Po. 3931, Fourteenth Ajax, chairman; H. W. Beck, Po. 9617V, vice-chairman; Fred B. Adam, Po. 242V; W. A. Layman, Po. 1166V, Seventh Mars; F. N. Boyer, Po. 1176; J. S. Tittle, Po. 1433; Martin J. Wolf, Po. 6027V, Fifteenth Ajax; G. E. Cullinan, Po. 2134; Fred Johnson, Po. 177V; Ell. C. Bennett, Po. 3932-12V, Mercury; T. H. Bibber, Po. 158V, Twelfth Pluto; A. C. Garrison, Po. 470V; J. R. Giessenbier; G. B. Walker, Po. 11762; T. K. Stevenson, Po. 11018, and E. H. Waddington, Po. 5176V. Floor Committee: T. H. Bibber, Po. 158V, chairman; E. C. Johnson, Po. 18535, vice-chairman; H. D. McBride, Po. 13817; T. P. Gleeson, Po. 795; C. E. Michel, Po. 9061; G. V. Bain, Po. 16272; L. H. Keller, Po. 10500, and H. W. Eals, Po. 9035. Reception Committee: Mr. and Mrs. F. A. Kehl; Mr. and Mrs. H. W. Beck; Mr. and Mrs. Geo. McD. Johns; Mr. and Mrs. Fred Johnson; Mr. and Mrs. C. P. Croninger; Mr. and Mrs. F. D. Phillips; Mr. and Mrs. John P. Casey; Mr. and Mrs. C. J. Sutter, and Mr. and Mrs. Martin J. Wolf. General chairman of arrangements: E. H. Waddington, Po. 5176V.

JOVIANS LOOK!

THE Jovian Constitution provides that a ballot be published here on which each Jovian may indicate his preference as to any individual for any elective office. The ballots are to be handed to the Nominating Committee for their information and guidance. Fill it out and mail to

THE JOVIAN ORDER

SYNDICATE TRUST BLDG. ST. LOUIS

THE JOVIAN ORDER
SYNDICATE TRUST BLDG.,
ST. LOUIS

My preference for (state name of office)

.....

for the next administration is.....

.....Po.....

(Sign here)

.....Po.....

City..... State.....

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NEWS OF JOVIAN LEAGUES

CHICAGO November 16 the League enjoyed an address by Jack Lait, short story writer, author of "Beef, Iron and Wine." The report that he would address the luncheon meeting brought out a crowd of 240. A constitutional amendment proposing to consolidate, or rather to hyphenize the words "Secretary" and "Treasurer" in the constitution so that they would read "Secretary-Treasurer," for the purpose of simplifying the methods of keeping the records of the League was submitted by a committee composed of R. I. Phillips. Po. 1091; J. N. Pierce, Po. 1598, and A. J. McGivern, Po. 3602. A vote on the proposed amendment was postponed to a later meeting of the League.

Dr. F. W. Gunsaulus, president of the Armour Institute, addressed the luncheon meeting November 23. He took for his subject "The Tomorrow of Applied Science."

* * * *

EAU CLAIRE, WIS. The Eau Claire League met at a dinner on the evening of November 13 to complete plans for "America's Electrical Week." After addresses on the subject by E. A. Peirce, Po. 6087, and A. R. Manley, Po. 18258, the following members were appointed to take charge of the various sections of a parade: N. J. Whelan, Po. 18267; W. E. McGovern, Po. 18259; W. G. Ressler, Po. 18264; A. A. Randall, Po. 19376; W. A. Parker, Po. 19374; E. S. Welsh, Po. 19392; H. G. Lawrence, Po. 19364; L. A. Urtubees, Po. 19389, and Gurth Williams, Po. 18268.

In balloting for Tribunes, E. C. Dearth, Po. 17144, was elected First Tribune, and C. P. Ives, Po. 19359, Second Tribune.

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BUFFALO As a feature of "America's Electrical Week," the Buffalo League gave a dinner to its members and visitors on the evening of December 2, an account of which will be found on another page of this issue.

* * * *

NASHVILLE, TENN. Starting before "America's Electrical Week," the Jovian League of Nashville began preparations for a safety movement that developed into the largest civic demonstration of any kind held in the city in recent years. A full account of the affair is given on another page.

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CLEVELAND The work of the various committees of the League contributed largely to the success of "America's Electrical Week" in Cleveland. While the activities of the committees were not centralized in an electrical show or similar demonstration a number of electrical establishments voluntarily acknowledged the assistance rendered by the League along commercial lines.

A theater party was given by the League on December 5.

At the luncheon December 14, H. H. Morrison, consulting engineer, was the speaker of the day. His subject was, "Electricity in the Construction and Operation of the Panama Canal." E. W. P. Smith, Po. 14580, presided as chairman.

Plans for a Christmas party and a New Year's party were considered.

* * * *

LOS ANGELES John G. Monahan, Po. 4736, district manager, Sagamo Electric Company, presided as chairman of the luncheon meeting November 15, at which John L. Butler, chief of police, was the principal speaker. Mr. Butler took for his subject, "Police Problems and Their Solution."

The luncheon of November 22 was presided over by Edw. Woodbury, Po. 17089. H. L. Carnahan was the principal speaker and took for his subject, "The Blue Sky Law."

M. H. JONES, Po. 2928, Twelfth Triton. If the Jovian Order ever requires a representative in a rapid-fire oratorical contest, former Triton Jones should have the call. Limited to two minutes in which to set forth the qualifications of his candidate for Congress, at the Jovian Convention, he put four hundred and twenty-one words in his address. The chairman's gavel cut his last word in two. Furthermore there was a boost in every sentence for Wm. Gloeckner, Po. 2360V, as evidenced by the fact that he is now Fifteenth Pluto

Thomas P. White, police judge, City of Los Angeles, addressed the meeting, November 29, on the subject, "Am I My Brother's Keeper." Watt Rucker Edwards, Po. 11182, of the Pacific States Electric Company, was chairman.

G. B. McLean, Po. 10755, was chairman of the meeting, December 6, and introduced Edward F. Trefz, associate secretary of the Los Angeles Chamber of Commerce, who addressed the League, taking for his subject, "The United States Chamber of Commerce."

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NEWARK, O. A recent analysis of the local Jovian League membership revealed the fact that 14 members were also members of the Newark Chamber of Commerce, and three members of the Mt. Vernon Chamber of Commerce, of whom one is president and another secretary of that body; another member is secretary of the Lancaster Chamber of Commerce; three are members of the Rotary Club, of which one is secretary, and three are members of the Building Exchange, of whom two are officers.

* * * *

KANSAS CITY The new officers of the Kansas City League have started out with an unusual amount of activity. President P. Lloyd Lewis, Po. 6018, has appointed a number of committees on various movements, Secretary L. E. Shoemaker, Po. 19190, advertising manager for the Missouri & Kansas Telephone Company, is doing a great deal to promote interest in the League meetings in his luncheon announcements, and B. S. Brown, Po. 16552, manager, Kansas City News Service, the new publicity man, is rendering valuable assistance.

Martin J. Wolf, Po. 6027V, Congressman for the Ninth District, was present and addressed the League October 27, the date of the

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HERMAN C. HEIDRICK, Po. 14439, Statesman for New Jersey, of the Electric Repair & Motor Company, Newark. Statesman Heidrick did splendid work for the Order last year as Tribune at Newark, and expects increasing activity in the Jovian affairs of his state this year

installation of the new officers, on the subject of the constitutional amendments that were passed at the Annual Convention. He dwelt particularly on the advantages to the League of securing a Jovian charter. At the conclusion of his address the secretary of the League was instructed by a unanimous vote to apply for a charter.

L. E. Holland, of the Holland Engraving Company, chairman of the vigilance committee of the Kansas City Advertising Club, spoke at the luncheon meeting November 24 on "What the Associated Advertising Clubs of America Are Doing For Better Business." A. E. Bettis, Po. 18902, presided as chairman.

The Jovian Electric Club was among the first of the civic bodies to participate in the plans for creating a health club. J. L. Schoen, Po. 18127, was named chairman of the publicity committee of the Health Club.

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SAN FRANCISCO Dr. Barton Warren Evermann, director of the museum, was the principal speaker at the League luncheon November 15. In his address on "The Aquarium," he pointed out the advantages of climatic conditions at San Francisco favorable to the purpose of maintaining an aquarium. R. E. Fisher, Po. 7389, officiated as chairman. Ignatz Steinhart, who will donate a sufficient fund to build the aquarium, made a brief address in which he stated the aquarium would be built as a memorial to his deceased brother. At the luncheon, November 22, J. G. Kasai, a distinguished writer and authority on international affairs, spoke on "Trade Relations Between Japan and the United States." Hon. Masanao Hanihara, Consul General of Japan, was a guest of the League. K. K. Kawakami, a newspaper and magazine writer also made a short address. November 29 was Oakland day. Hon. Joseph R. Knowland was the principal speaker. Frank A. Leach, Jr., presided as chairman.

John Barry was the principal speaker December 4, addressing the League on "War Conditions in Europe."

The Electric Show in the ball room of the Palace Hotel was opened on the evening of December 2. There was a splendid entertainment program followed by dancing.

"What Has Been Done Through Co-operation," was the subject of an address delivered by A. B. C. Dohrmann, on December 5. Frederick J. Koster presided as chairman.

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NEW YORK J. M. Wakeman, Po. 524, Fifth Apollo, and Rev. C. Wallace Petty, addressed the luncheon meeting at Browne's Chop House at the regular luncheon December 6. Author Williams, Po. 1917, officiated as chairman of the occasion.

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PHILADELPHIA Martin J. Wolf, Po. 6027V, Congressman for the Ninth District, was the principal speaker at the meeting at the Hotel Adelphia, November 16. Congressman Wolf's address covered the work of the Annual Convention and the progress being made by the "One Hundred Point Committee," of which he is chairman. W. Deveraux, Po. 2367, was appointed local chairman of the committee. Jas. R. Pollock, Po. 18675, Vulcan, and James H. Betts, Po. 6765, Fourteenth Vulcan, were visitors at the luncheon.

The new officers of the League are A. L. Hallstrom, Po. 1611, president; A. E. Berry, Po. 14650, vice-president, and L. R. Browne, Po. 14654, secretary-treasurer. The activities of the officers and members of the League in connection with "America's Electrical Week" gave them much favorable publicity in the local press. In an interview President Hallstrom outlined the work the local League and the Jovian Order is doing for the development of the electrical industry. Frank H. Stewart, Po. 530V, president, F. H. Stewart Electric Company, addressed the luncheon meeting December 14, on "Historical Seventh Street."

* * * *

WINNIPEG Rev. W. J. Hindley addressed the luncheon meeting at the St. Regis Hotel, November 29, on the "Duties of the Various Citizens to the Nation in this War Crisis." Wm. Pearson, chairman of the "House and Town Planning Commission for Greater Winnipeg," gave an outline of the work being performed by the commission.

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ST. LOUIS Owing to the death of A. C. Einstein, Po. 5760, a change was made in the program of the luncheon meeting of November 21, and obituary addresses were made by Richard McCulloch, Po. 9563, assistant vice-president of the United Railways Company; Louis P. Aloe, president of the St. Louis City Council, and Henry W. Kiel, Po. 12312, mayor of St. Louis.

W. E. Bilhimer, sales manager, Franklin Life Insurance Company, addressed the meeting November 28, on "Salesmanship." F. D. Phillips, Po. 313, officiated as chairman. The luncheon was held at the Mercantile Club. E. H. Waddington, Po. 5176, chairman of the entertainment committee, announced that negotiations were pending for the permanent establishment of League headquarters at the Mercantile Club.

At the luncheon December 5, Wm. J. Davis, president, American Lighting Company, who had charge of the work of flood-lighting Niagara Falls, addressed the luncheon on "Flood-lighting Niagara Falls." T. K. Stevenson, Po. 11018, presided as chairman.

Charles R. Meston, Po. 19217, vice-president, Emerson Electric Company, addressed the luncheon meeting December 12. His subject was "Lighting the Artist's Guild." Robert E. Lee, Po. 15708, was chairman of the day.

The League gave a jubilee and dance at the Mercantile Club on the evening of December 8 as part of the program celebrating "America's Electrical Week," an account of which is given on another page.

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ELECTION BETS

Words and Deeds of Jean Baptiste Trudeau, fully and faithfully reported for The Jovian, by GEORGE C. ROUGH, Po. 512V, PAST TWELFTH HERCULES

MA FREN', Polydore Choquette, is axin' me, las' wick, go wit' heem on de gang was build telephone line near d'Iberville. Two dollaire an' half 'day an' board. So am say am betch heem hees life. Am sure de boy for dat job. It long tam' 'ave chances for meet all de feller on de Canada Hotel on de nudder side de reever, an' perhaps, mebbee * * * * * * Wall—It don' do no good expec' too much on St. John's, for it be ver' quiet plas. It so quiet dat ev'ry tam Alec Cousineau put up de transformateur on de pole, mos' ev'rybody on de town come an' sit on de nudder side de road for wait see heem drop. Alec was drop two las' mont', so w'en day see heem start out wit' transformateur on hees rig, dey t'ink for sure dey get some excitement, an' de crowd is collec' queek. Las' tam de moving picture man come wit' hees instrument, but Alec not drop heem dat tam. Was only small transformateur (1 K. W.) an' he carry it up de pole on hees back.

You know de beeg 'lection on de State was pull off las' wick? Wall—On de gang wit' Polydore was two Yankee feller dat leev on Rouse's Point. Dey only leev dere since St. J. Baptiste day las' June. Beeg feller nam' Joe Bolduc, an' funny leetle feller nam' Placide Guay. Dey not Yankee feller a'tall—was born on Montreal—French Canadien fadder an' modder—but since leev on Rouse's Point, was No. 1 Yankee man—only dey got no vote yet.

On 'lection day Joe was up de pole, an' Placide was on de groun'. Joe is holler, so loud you can hear heem ten pole off, "PLACIDE—BY GAR—no use talkin', dat Hughes is goin' be 'lec' for sure."

Placide is look up at Joe an' say, "You crazee? Dat Hughes 'ave as plenty chances be 'lec' as mese'f. He don' know nuttings 'bout run de countree—got no experience a'tall. Dey tell' me he was work on de bench on N. Y. State. Bah—no chances—*no chances*. Hughes? You mak' me seek. 'Ave you pass all dis tam' on de State an' not know dat Wilson de man for de job. He kep us out de war, Aint He? WALL? W'at more you want?"

Joe is near fall off de crossarm he so mad. He shake de fis' at Placide an' say plenty de swear word, an' jus' miss Placide hees head wit' de connector. "No chances Ha? No Chances Ha? Suppose Hughes can kep us out de war also? If he work on de bench mebbe he mak' plenty de ammunition; an' de more plenty de ammunition, de more de prosperite Eh? You got sense lak' de rabbitt. I bet you t'ousan' dollarie Hughes is 'lec.' Am so sure 'bout dat I toll' you w'at I do. I mak' de bargain wit' you. Suppose Wilson is 'lec', I roll de peanut wit' ma nose across de bridge an' pay de trit for de crowd at de Canada Hotel. An' if Hughes is 'elec', you roll de peanut 'cross de bridge an' pay de trit. An', By Gar, I wish dat Richelieu Reever is two mile wide, 'cos am goin' 'ave lots satisfaction watch you poke dat peanut t'roo de slush an' mud an' nudder tings."

Placide is nevaire tak' w'at you call de "back water," an' he say right off "YOURON" (suppose dat de Yankee word he learn on Rouse's Point). "Tonight de bulletin she'll tell de news dat Wilson hees 'lec', an' tomorrow morning you mak' de fun for de crowd. You get ready for de start affer breakfas'. I bring de peanut."

Dat night de crowd was hang 'round de hotel an' get ver' much excite. Joe hees mak' more noise den bull moose. De bulletin say "HUGHES' MAJORITY N. Y. STATE 100,000." More yell from Joe. "ILLINOIS 200,000 FOR HUGHES." Nudder yell more loud from Joe. "CALIFORNIA IN 27 PRECINCTS GIVES HUGHES 40,000." Joe say, "Dat's not nuff, mak' it 50,000." An' he laf an' poke Placide on de rib an' say "W'at I toll' you? Get ready roll de peanut. Wan small boy on de crowd shout, "A bas les Democrats," Joe say, "Am betch heem ma life" an' den ev'rybody 'ave de whiskey on Joe. Bulletin still come along "Avalanche for Hughes." Joe go crazee. Placide he is look ver' seek. Bulletin say, "LOUISIANA SOLID FOR WILSON." Placide smile leetle bit. Joe say, "Dat's all right, only Democrat down dere anyway." "WILSON CARRIES N. Y. CITY." "Hellofaload," Joe is remark. Placide t'ink hees turn buy de whiskey, but he don' look too much please. De excitement get louder an' louder till 'bout 12 o'clock de bulletin say, "HUGHES ELECTED." Joe near raise de roof. Placide too seek for stan' up. Everybody go home to bed, Joe try sing de word, "HUGHES 'lec', "HUGHES 'LEC' to de tune of "A la Claire Fontaine," an' tell ev'rybody be on de bridge 8 o'clock sharpe for see Placide roll de peanut.

Nex' morning ver' early de gang an' plenty nudder peep be dere. Placide (hees cut leetle feller) he 'rive wit' football sheeld on hees nose an' hundred bag de peanut. He geev dem to de crowd an' say, "Go ahead on de bridge an' spill dem all over." So w'en he start for roll, an' Joe hees back is turn, Placide is jomp two t'ree yard ahead ev'ry tam an' alway fin' de peanut. When Placide is 'bout half way on de bridge, newsboy come along an' call, "EXTRA—EXTRA—WILSON ELECTED—BIG SLIDE IN THE WEST." Placide rise up queek out de mud an' say, "W'AT'S DAT? W'AT'S DAT?" and Joe is also say "W'at's dat?" nice an' quiet. Den ev'rybody get more excite den before. Joe he say, "We call de bet off an' I stan' de trit for de crowd." "Non, Non," Placide hees say, "You don' get off lak' dat. It your turn roll de peanut." Joe he don' lak de idee, but de crowd is side wit' Placide, so Joe t'ink it bes' for go back to end de bridge an'commence for roll. Placide go ahead an' kick all de peanut w'at de crowd was drop, so Joe 'ave de clear track, an' w'en it start for rain, Joe is ax' Placide len' heem dat sheeld for de nose. Placide is say, "Ba Non—Wit' dat on you can' smell de peanut. Joe is 'ave pretty hard tam' an' not go ver' fas', till, by'n by, nudder newsboy holler, "EXTRA—EXTRA—HUGHES CLAIMS THE ELECTION." Den de fight start:

Joe jomp up an' run at Placide—"No use try settle dat 'lection by roll de peanut. By Gar—I t'row you in de reever." "HUGHES 'LEC'." "Non—WILSON 'LEC'." "Non HUGHES 'LEC'." "Non—WILSON 'LEC'." Joe get more mad all de tam, an' Placide, he watch hees chances an' let Joe 'ave one right on de eye queek. Joe get up an' ev'rybody t'ink Placide be dead man sure. Joe mak' long reach but miss, an' Placide turn 'round jus' in tam' catch Joe nudder one on de jaw, but he get up 'fore de count, mad lak' de bull, an' crowd keep out de way. Placide look for chance for run—not queek nuff. Joe right on top. Placide stoop queek an' Joe go over on hees head, an' one leetle smash back de ear settle heem. Den ma fren' Polydore get de rig, an' ev'rybody follow to the Canada Hotal.

W'en Joe come to an' fin' dat Wilson is 'lec' for sure, he shake han' wit' Placide, an' Placide he say, "Joe, w'at you 'ave?" an' Joe say, "Lettle Whiskey," an' den he smile leetle bit an' say. "Placide—anyhow day sure was dam close 'lection."

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The Lash That Drives

By W. R. J.

IN THIS the game of life we play
The sunshine comes and goes;
The hand that feels a thorn today,
Tomorrow plucks a rose.
The rule of Fate behind the veil
May change our joy to gloom,
The gentle breeze into a gale
Or cause dead hopes to bloom,
But from beyond the tragic folds
That shrouds the goal we yearn
The voice of duty ever scolds
With flagrant words that burn.
To some veiled port of destiny,
Each soul drives on its way
Before the lash of mystery
That few dare disobey.

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The Return Circuit

Edited by W. R. Joyes, Po. 13813.

The Order of Things

By W. R. J.

THIS was the order of things, forsooth,
When man was a vandal in days gone by;
"An eye for an eye and a tooth for a tooth,"
An eye for a tooth and a tooth for an eye.
In the dark old days of the club and the spear
The rule that was law was the might of the clan,
And the men of brawn were the ones to fear,
For the stanchest blow made the greatest man.

This is the order that rules supreme,
For a dynamo is the brain of a man;
A plan for a plan and a scheme for a scheme,
A plan for a scheme and a scheme for a plan.
For the strife of the age is for wealth and fame,
And the shrewd may attain to the high degrees,
Where the golden calf is a carven name
And the house where the fool may take his ease.

This is the order of things worth while,
The hope of the Eden for which we long;
A song for a song and a smile for a smile,
A song for a smile and a smile for a song—
The order of love and of brotherhood,
Where the scales of law and of justice rust,
For the stanchest blow is the greatest good
And the plans of each fellow all men may trust.

* * * *

Essays on Prevailing Conditions

HIGH COST OF LIVING

VIEWED from the standpoint of the pocket book, the high cost of living is one of the most diminishing subjects the holder of the almighty dollar has to contend with. From a bird's eye view (the only view now possible without looking skywards), it would seem that a chute has been greased for the pay envelope and it has become a contender for the toboggan record. In fact, it requires a split-second watch and a masterful command of rapid-fire vocabulary to record and announce the time that wages are in the possession of the earner.

The movements of the little disk that reposes between the bas-relief of the Goddess of Liberty and the prototype of the American eagle has increased in velocity until only the sensation of its friction in passing remains to remind us of its existence. We say "Thank you," to the paying teller and "You're welcome," to the grocery man and the butcher in such rapid succession that by the time the echoes get back we don't know to whom we were talking. The man who formerly examined the minting date on the coins and counted the feathers in the eagle's tail has been caught in the seething vortex of existence and now wanders dazed and aimlessly without a mission in life. Our Uncles Skinflint are parting with coins whose harmonious jingle has been music to their ears, and our Cousins Spendthrift are looking for coins to part from without questioning their Jingling qualities.

Ordinarily it would seem that the amount of commotion he has caused would gratify even "High-Cost's" desire for notoriety, but from all indications he is as oblivious to downward tendencies as the needle of a compass is to the existence of the equator. A comparison of the price of tomato-catsup in 1902 don't appear to interest him and arguments concerning the fictitious valuation of grape-fruit fail to affect his quotations.

The trouble with the boycott as a means of retarding his aviating propensities lies in the fact that it can only ballast one side at a time. While the boycott is on for bean soup, the prices of slaw and dill pickles say "howdy do" to the sparrow-hawks, and when Mrs. Housewife scratches the name of hogshead cheese off of her visiting list the string of frankfurters unhitches from its hanger and does a gyration among the upper air currents.

Under the prevailing conditions the only advice we feel safe in giving is to buy quick. Do not argue with the seller, remember he has one eye on the quotation board. Don't entertain any hopes that because baby ribbon is nine dollars a yard in the morning it won't be nine-thirty-nine in the closing quotations. The only way to beat the game is to buy just ahead of the hourly fluctuations. They are sure to be higher, so you can't lose.

* * * *

The Little Household Fairy

By W. R. J.

I COME to you with magic of a fairy,
To lift the load of care that weighs you down.
The wand I wave will make you happy Mary,
And help you bear the burdens of your crown.
I know you are a queen—you are a ruler,
At least that's what he told you when you wed,
But you have found that queens have cause to murmur,
And have to labor for their daily bread.
You've also found at times that it was trying
To keep your little kingdom spick and span,
And often you have found that you were sighing,
At times when he, your king, was just a man.
He does not understand your trials with the cleaning,
Because his mother slaved her life away;
He does not note the care your brow is gleaning,
While many other queens are bright and gay.
The trouble is that you have been reluctant,
To call me to your aid with my advice.
You'll find that I am of a clan most gallant,
Who hasten at your summons in a trice.
I'll bring to you our brownie household fairies,
Who sweep and cook and wash and iron too;
They've made electric queens of other Marys
They'll make a real electric queen of you.

* * * *

Politics

By W. R. J.

OF THE angles of life that a man may observe,
And the twists and the turns of its varying curve,
No phase of existence compares with the tricks,
That are brewed in the game that is called "politics."
You may follow the legends of man to his birth;
And the rise and the fall of the nations of earth;
You may drag-net the cities and scour the plain,
But Diogenes like with a mission in vain,
For of dodges as slick and of schemes to ensnare
The devil, himself, has no ways to compare.

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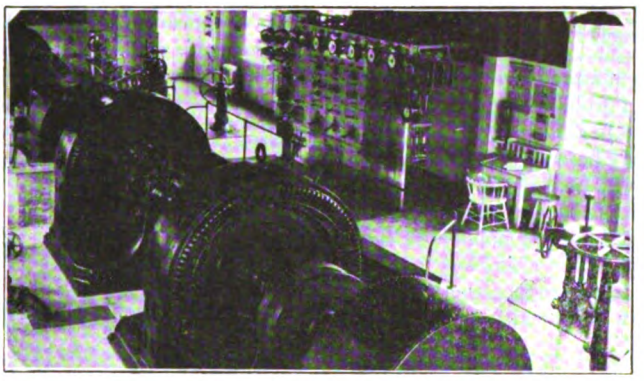
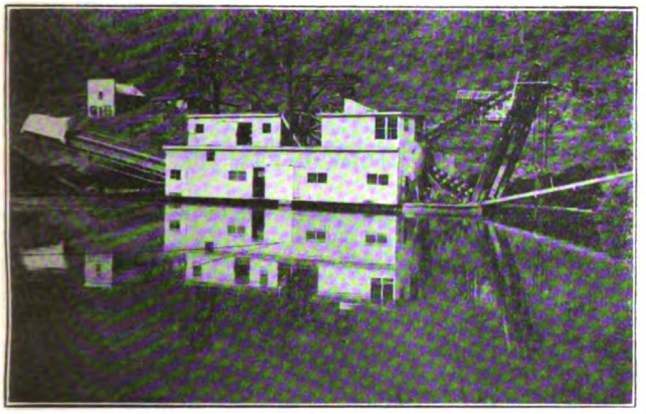
ELECTRIFYING THE MINING INDUSTRY OF THE NORTH

THAT electricity is becoming an important factor in the gold mining industry of the far North can be seen by the accompanying reproductions. Electrically operated equipment has been found to be superior to that operated by any other power, and owing to the natural advantages of water power it has also been found to be much more economical. Mining properties are being profitably operated that were considered worthless prior to the introduction of hydro-electric power plants, and the great obstacle to the development of new property, viz.: fuel transportation, has been entirely overcome. In fact it is becoming more apparent each year to prospectors who have made an exhaustive study of conditions that Alaska's hope for the development of her wonderful mineral resources will depend largely on electricity.



Interior of Power House, Twelve Mile River



Electric Gold Mining Dredge

Birds-eye View of Dawson, B. C.

The picture at the top shows the interior of a hydro-electric power plant located on Twelve Mile River. This together with the electric mining dredge at the left is the property of the Yukon Gold Mining Company. The point at which the dredge is working is 65 miles from the power plant. A feed line crossing the lake on floats is used to make the connection with the overhead transmission line at the opposite side. The power plant is one of several that have been built recently.

The picture at the right is a bird's eye view of Dawson, B. C., looking up the Yukon River. The one at the bottom is a street view of Dawson taken while the thermometer registered 58 degrees below zero. Here, again electricity plays an important part in Artic Circle life. The principal visiting on days of this kind is done by telephone, and the convenience of the strands of wire stretching overhead can readily be appreciated.

* * * *

EDISON'S TIME CARD

"Mr. Edison, the inventor of the incandescent lamp, has defined genius as 2 per cent inspiration and 98 per cent perspiration," says the Southwestern Electrician, in an article in its December issue. "In his own working rooms in New Jersey, Mr. Edison punches a time card each day when he comes and goes just as any other employe, and his time card is the best evidence of his belief in his definition.

"A study of one of Mr. Edison's time cards is interesting. This, his time card for the week ending August 27, shows that on Wednesday, Mr. Edison did not come in at all in the morning, for he was already in, having worked all night. He left at 8:16 in the morning and returned six hours later, 'punching in' at 2:20. Again he worked all night, leaving the following morning at 8:11, after an 18-hour stretch of work. Thus he labored night after night, and at the end of the week the punching shows a total of 95 hours and 49 minutes to his credit. This time card was selected at random and does not differ much from the time card found in the rack under Mr. Edison's name at the end of almost any week."

Fifty-eight Below Zero in Dawson

PRICE OF COPPER STILL CLIMBING

December 4, copper passed above the 35-cent mark, and predictions are being made that it will continue to advance in price. Copper wire was quoted December 5, at 40.50 for prompt delivery and 39.25, for January delivery.

* * * *

THE MOVEMENT TO ESTABLISH SAVING DEPARTMENTS CONTINUES TO GROW

One of the latest additions to the list of corporations that have established savings departments for the benefit of their employes is the New England Power Company. The plan the company has adopted is of a stock-sharing nature, providing for the sale of a limited number of shares of stock to each employe to be prorated according to the salary of the employe and sold to him on the installment plan. A price of $100.00 per share has been fixed, and subscriptions for one or more shares of the preferred stock of the company will be received from employes at a regular monthly payment of $2.00 per share. Payments may also be made in full at the time of purchase of the stock, or additional payments may be made above the installments at the discretion of the purchaser.

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Practical Lessons in Electricity

LESSON TWENTY-ONE

PRINCIPLES AND CONSTRUCTION OF DIRECT-CURRENT GENERATOR ARMATURES

By TERRELL CROFT

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THE FUNCTION of a direct-current armature if for generators for most commercial purposes, to produce an unvarying, continuous e.m.f. The alternating e.m.f. induced in a rotating loop of only one turn (Fig. 2—*I*) may be rectified into a direct e.m.f. in the external circuit, but it will be a pulsating e.m.f.—it is not a steady e.m.f.—which is always in the same direction. Obviously this pulsating e.m.f. would not be applicable for a majority of uses, because it consists merely of a series of impulses. How armatures may be arranged so as to produce the "smooth" continuous e.m.f.s, such as that shown graphically in Fig. 1, will be explained.

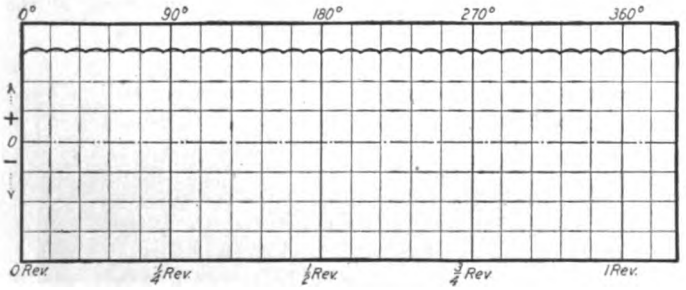

Fig. 1—Graph of a Practically-Constant E.M.F.

Imagine the primitive armature of a direct-current generator as shown in Fig. 2—*I*, modified by the addition of another coil and pair of commutator segments as suggested in Fig. 3, and compare the two arrangements. With the single-coil arrangement, it is obvious that there are certain instants at which no e.m.f. is being induced. Such instants occur twice during each revolution. Also, for a considerable proportion of each revolution the e.m.f. induced is small. But when the two coil "armature" of Fig. 3 is rotated in the field there is no instant when the e.m.f. impressed across the brushes is zero. The brushes are so disposed that they always connect with the coil in which the greater e.m.f. is being induced.

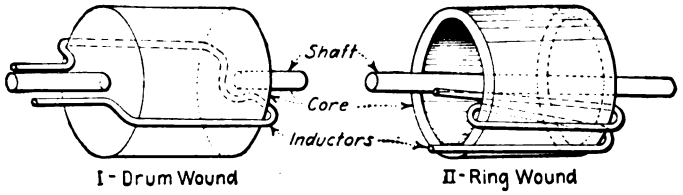

Fig. 2—Diagrammatic Illustrations of Drum-Wound and Ring-Wound Armatures

EXAMPLE.—Consider the elementary generator of Fig. 3. One coil has been shown dark-colored and the other white, merely for distinction, otherwise they are the same. The light-colored coil is cutting flux at a maximum rate at the instant depicted and the dark coil is not cutting flux. At this instant it is the white coil which is impelling the current in the external circuit. As the coil is rotated, the e.m.f. induced in the white coil will decrease and that in the dark coil will increase. The e.m.f.s in both coils will be equal when the coils have been turned ¼ revolution or 45 degrees from the starting position, which is shown in Fig. 3. When the e.m.f.s thus become equal, the brushes bridge the commutator segments connected to the coils. An instant later, the brushes contact only with the segments connected with the dark coil. As rotation of the coil is continued the cycle of occurrences just described will be repeated.

If the e.m.f.s induced by this two-coil armature be plotted into a graph, it will be of the form indicated in Fig. 4. The heavy line indicates the e.m.f. impressed on the brushes. The current circulated in the external circuit will vary in accordance with a similar curve. The dotted line shows the e.m.f. induced in the white coil and the dashed line that in the dark coil—or vice versa. Every ¼ revolution, or 90 degrees, the e.m.f. is a maximum. Furthermore, every ¼ revolution—midway between the maximum instants—the e.m.f.s are equal and less than the maximum. Note that by the addition of 1 coil the brush e.m.f. has been prevented from decreasing to zero at any instant. It is apparent that by adding more coils the variation of brush e.m.f. during a revolution can be still further decreased.

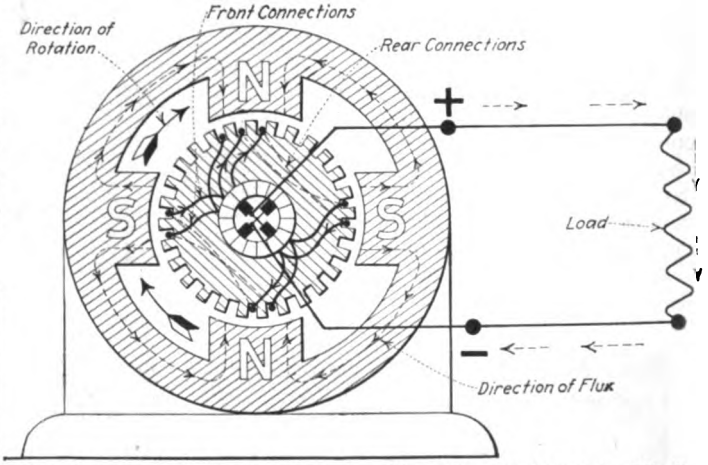

Fig. 2-A—Diagram Showing Part of a Direct-Current Armature Winding in Position on an Armature—Verify the E.M.F. Directions Shown by Applying the Right Hand Rule

To generate a constant, direct e.m.f., many inductors are properly arranged on an iron core so as to form an armature. The conductors are suitably connected together, in ways which will be described, and to commutator bars, as shown in Fig. 5. Then to generate an e.m.f. this armature is rotated at uniform speed in a magnetic field. Some of the inductors—not the same ones constantly, but different ones at different instants of a revolution—are always cutting flux at the maximum rate, that is, cutting at right angles across the flux. Thereby a direct, constant e.m.f. is impressed on the brushes. The graph of such an e.m.f. is given in Fig. 1. Obviously, the current impelled in an external circuit of constant resistance by this e.m.f. (Fig. 2—*A*) will be constant (practically) also and in every case will be inversely proportional to the resistance of the *entire circuit*.

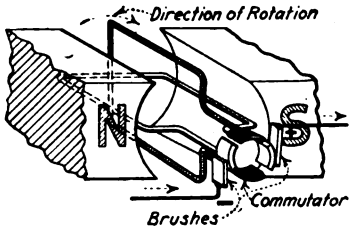

Fig. 3—Showing an Elementary Direct-Current Generator with a Two-Coil Armature

Open-coil and closed-coil armature windings are diagramed in Fig. 6. In *open-coil windings*, the coils as a whole do not form a closed circuit but each coil is in circuit only when the commutator bars to which it is attached, contacts with the brushes. In *closed coil windings* the coils as a whole, together with the commutator segments to which they are connected, form a closed circuit upon themselves, and each coil always comprises part of the circuit. Practically all modern armatures are of the closed-coil type. Open-coil armatures have been used to some extent in series-arc-lighting generators.

Effect of open and closed-coil windings on brush e.m.f. With an open-coil winding, Fig. 6—*I*, the e.m.f. of each coil decreases to zero every one-half revolution or 180 degrees, as shown by the dotted and the dashed curves of Fig. 7. The dotted curve shows the variation with the time of the e.m.f. of the white coil, and the dashed curve that of the dark-colored coil. With a closed-coil winding (Fig. 6—*II*), since the coils are connected in series,

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the e.m.f. impressed on the brushes is at any instant the sum of the e.m.f.s induced in the coils at that instant. Thus the full-line curve of Fig. 7 may be taken as the e.m.f. curve of the closed-coil winding of Fig. 6—*II*. This full-line curve was obtained by adding together the values of the dotted and the dashed curves. Note then that a winding connected "closed-coil" has the property of producing a higher e.m.f. than the same winding connected "open-coil."

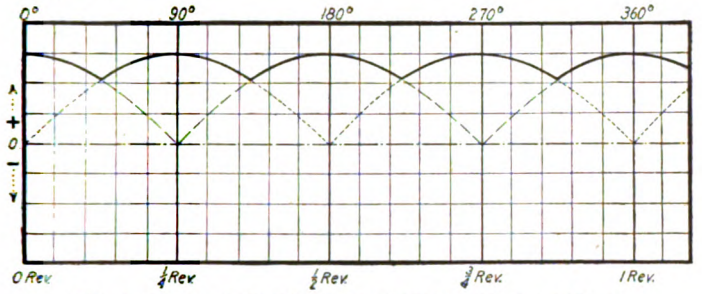

Fig. 4—Graph of E.M.F. of Two-Coil Generator of Fig. 1

The functions of the armature core are two:—(1) It constitutes a strong mechanical support for the inductors. (2) It decreases the reluctance of the magnetic circuit and causes the flux to follow paths where it will be most effective.

EXAMPLES.—If the inductors of Fig. 3 were wound on cylindrical iron core, instead of on an "air core" arranged for rotation between the *N* and the *S* pole, the reluctance of the magnetic circuit would be very greatly decreased and a correspondingly fewer number of amp-turns would produce the flux necessary for the induction of the required voltage. In a multipolar machine, if there were no armature core the flux would tend to bridge directly between the poles, as at Fig. 8—*I*, where the inductors would not cut across it. With an iron core, incorporated as shown at *II*, practically all of the flux traverses the core and crosses the air gap, where the inductors will cut through it.

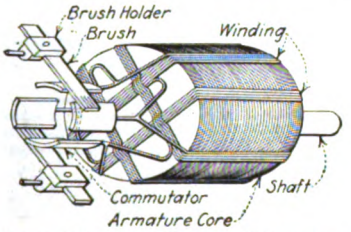

Fig. 5—Showing a Four-Coil Armature (This is a closed circuit, drum-winding)

So that the core will decrease the reluctance of the magnetic circuit as much as possible, it should be of highly permeable material. Hence, in practice, soft iron or electrical steel is used. Since the core is, when the generator is in operation, being magnetized by induction in one direction (N) and then demagnetized and magnetized in the other direction (S), as portions of its surface pass under the poles of opposite polarity in succession, it is subject to hysteresis. High-grade iron should therefore be used to maintain the hysteresis loss at a minimum. Eddy currents

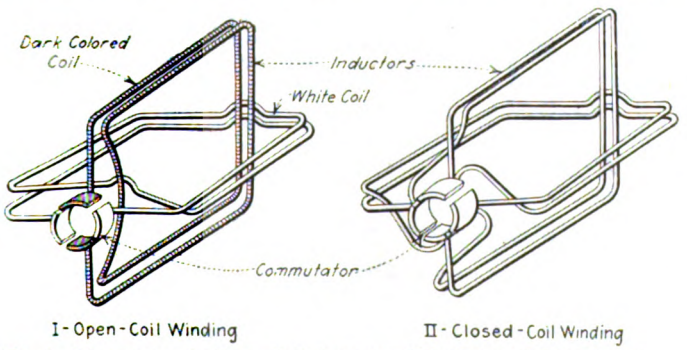

Fig. 6—Diagrammatic Open-Coil Armature Winding and Closed-Coil Armature Winding

are also induced in the iron when it is being rotated in the magnetic field. Hence cores should not be solid but should be built up or laminated. The cores are composed of sheet-iron laminations called armature-core punchings. To maintain the core temperature at a minimum, ventilating spaces or ducts (Fig. 9) are provided at certain locations between laminations. Such ducts are always provided in the cores of large generators and frequently in those of small ones. The arms of the armature spider, when it is rotated, act like blades of a ventilating fan, and force air currents through the ducts.

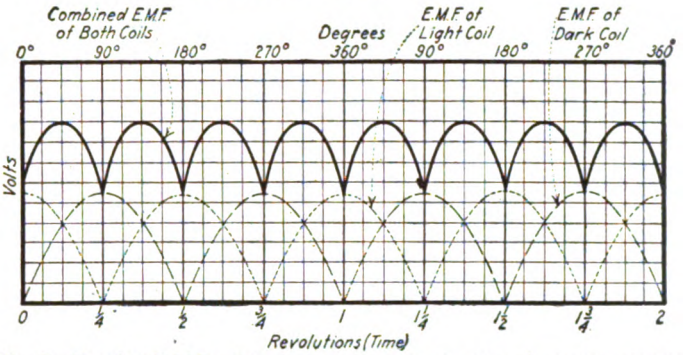

Fig. 7—Showing E.M.F.s Impressed on Brushes by Open and Closed-Coil Windings

Aramture-core punchings are illustrated in Figs. 9 and 10. These punchings comprise the laminations of which the core is assembled. For generators of the smaller capacities each punching is a suitably-perforated, toothed disc, as shown in Fig. 9—*I*. Cores for the larger machines are assembled from segmental punchings as shown in Fig. 10. Slots are provided in the punchings for the accommodation of the armature winding or inductors.

Drum-wound and ring-wound armatures are illustrated diagrammatically in Fig. 2. These comprise the two classes into which armatures may be divided as regards disposition of the winding. *A drum-wound armature* is one the inductors of which lie wholly on or in slots in its cylindrical surface; the inductors do not pass through the interior of the rings. *A ring-wound armature* is one the coils of which are wound around the rim of a ring-shaped iron core.

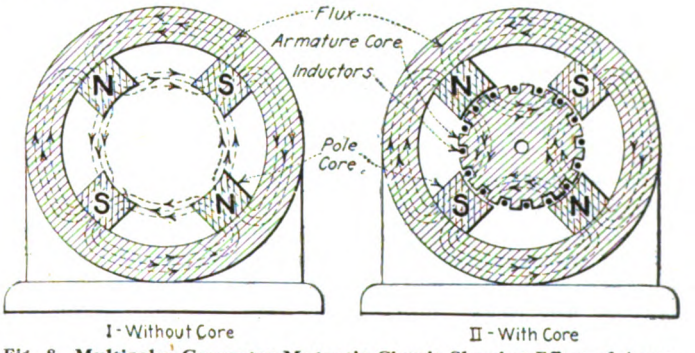

Fig. 8—Multipolar-Generator Magnetic Circuit Showing Effect of Armature Core on Flux Distribution

NOTE that armatures may be classified into open-coil and closed-coil as regards the interconnection of the coils, and also into drum-wound and ring-wound, as above, as regards the disposition of the winding on the armature core.

In effect, a ring-winding constitutes a continuous helix, wound around the armature core, as shown in Fig. 11. Ring-windings are seldom if ever used for the armatures of modern generators.

The principle of operation of both drum and ring-wound armatures is the same, but since the ring-wound type is now seldom used, most of the treatment herein will relate specifically to drum-wound armatures. Note that, while with drum-wound armatures both sides of each loop or coil cut flux, with ring-wound armatures only one side cuts flux; the other side of each coil lies within the ring where there is practically no flux.

The disadvantages of the ring-winding are:—(1) It is necessary in making a ring-winding to thread the winding conductor through the space within the hollow-cylinder core, which necessitates bending the conductor back and forth. Thus, the coils must

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be wound on the core by hand. (2) Because of this bending it is very difficult to form large conductors into a ring-winding. (3) The insulation on the conductors is likely to be injured by the bending process, hence insulation must, in such cases, be placed on the coils while they are being wound. (4) It is difficult to secure ring-wound coils securely in their positions.

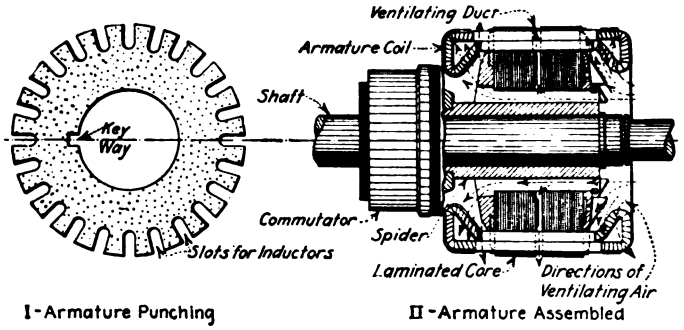

Fig. 9—Illustrating Armature Punching in Armature Construction

The advantages of drum-windings are:—(1) The coils may be *form-wound* (Fig. 12), that is, since all of the coils for a given armature are of the same shape and size they may be wound on forms. In some cases these form-wound coils may be made with automatic machinery. The resulting economy in cost is obvious. (2) Conductors of any reasonable size may be made up into form-wound coils. (3) The form-wound coils can be readily placed and firmly secured in the armature-core slots prepared for their reception.

The process of making a form-wound coil is as follows:—The conductors, which are wires or bars, covered with a thin insulation such as a winding of cotton, are first wound on a form into a coil of the contour and size required. They are then wrapped with insulating tapes, heated to eliminate moisture, and impregnated with some waterproof insulating compound.

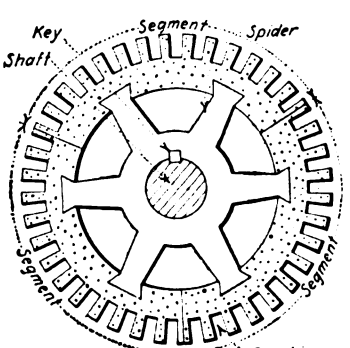

Fig. 10—Armature Core Built Up of Segments

In winding an armature with form-wound coils, the coils are all placed in their proper positions in the slots, Fig. 13, and are held in place therein with wedges of fiber, wood or similar tough insulating material as shown in Fig. 14. Servings of steel wire wound into banding (Fig. 15) are usually also placed around the armatures to further secure the winding in place.

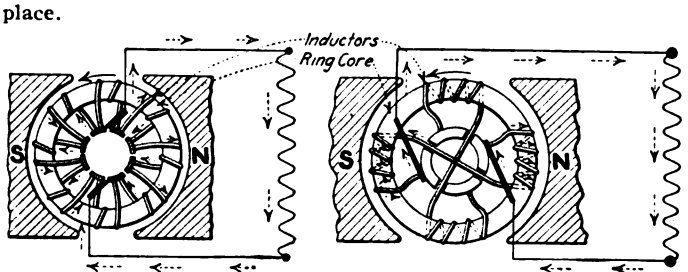

Fig. 11—Diagrams of Ring-Wound Armatures, Closed-Coil and Open-Coil

Commutators in practical generators always have a number—sometimes a great number—of bars. It is almost obvious from a consideration of Figs. 3 and 15, that as the number of coils in an armature is increased, the number of commutator segments must be proportionately increased.

Actual commutators, though simple in principle, are very difficult to construct properly. The commutator is the weakest member, both mechanically and electrically, of any direct-current generator. The great majority of difficulties encountered with direct-current machines are "*commutation troubles.*" The forged copper segments (Fig. 16—*I*) are assembled into a cylinder on a sleeve or spider (Fig. 17), each copper segment being insulated from its neighbor by a thin segment of mica. The segments are also insulated from the iron or steel member which carries them

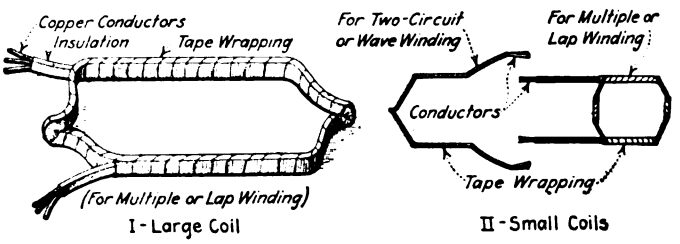

Fig. 12—Form-Wound Armature Coils for Large and Small Generators

with mica sleeves and rings. The *wedge rings* (Fig. 17), when tightened by the turning of a clamping ring or by the drawing up of clamping bolts, bind the segments securely in position. The commutator having been thus assembled it is mounted in a lathe and its surface machined into a perfect cylinder.

Armature windings of modern machines are in almost every case of the drum type, hence, only these will be discussed. It is obvious (see Figs. 2 and 2—*A*) that the e.m.f. in one side of a drum-winding coil must be from *front-to-rear* at instants when the e.m.f. in the other side of the coil is from rear-to-front, so that the two e.m.f.s will act in unison and combine instead of opposing

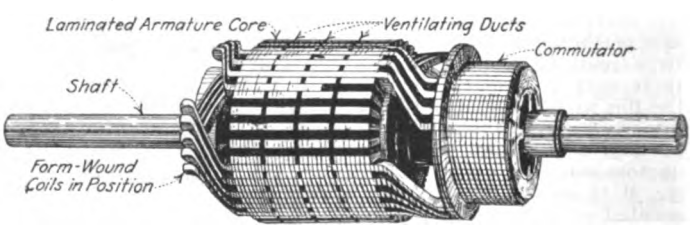

Fig. 13—A Drum-Wound Armature with a Portion of its Form-Wound Coils in Position

and tending to neutralize one another. It follows then that the coils on a drum-armature core must be so arranged that two inductors of any coil will never be passing under like poles at the same instant. The coil sides should, therefore, be separated by an angle (*A*, Fig. 18) about equal to the angle *B* between center lines. Angle *A* is called the *angular pitch* or *spread* of the coils or the *winding pitch*. Angle *B* is the *angular pole-pitch*. The subject of armature windings is an extensive and rather involved one, hence only the essential fundamentals can be discussed herein.

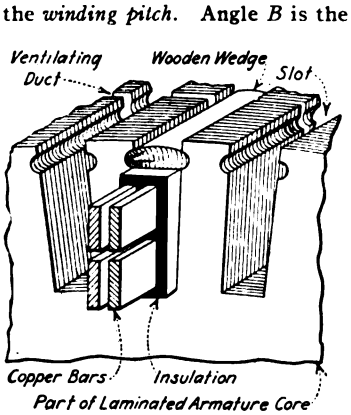

Fig. 14—Portion of a Drum-Wound Armature for a Large Generator Showing Inductors in Position in Slot

Types of Windings.—Lap and Wave Windings. There are many possible types of windings but it is seldom that any but the *lap winding* (*parallel or multiple drum-winding*) the *wave winding* (two-circuit series drum-winding) are used.

The lap winding is ordinarily used for all direct-current and for some alternating-current armatures. It has the advantages of adaptability and simplicity but is not readily adapted for the inducing of high e.m.f.s. With it there are always as many studs of brushes—hence current paths through the armature—as there are poles. A lap winding can be distinguished from the fact that the rear end connections "lap" over one another as shown by the black-line

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coil, in the winding development of Fig. 19. Coils for lap windings are shown in Fig. 12.

The wave winding is used for direct-current drum armatures where a lap winding would not provide a sufficiently high e.m.f. or would require an excessive number of fine-wire turns per coil. With a wave winding (Fig. 20) only two brush studs are necessary,

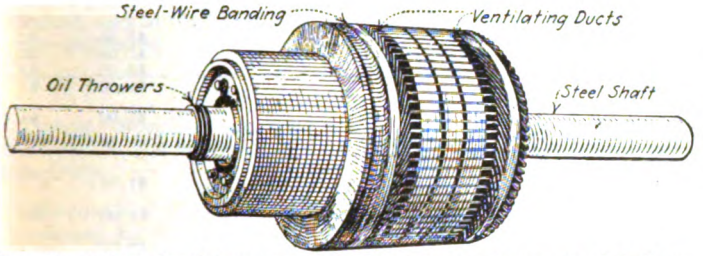

Fig. 15—A Completed Armature for a Direct-Current Generator of Medium Capacity

but more, up to a number equal to the number of poles, can be used. There are always only two circuits in multiple, irrespective of the number of poles. This type of winding can be distinguished from the fact that the rear end connections form geometric "waves" from coil to coil as indicated by the black line coil in Fig. 20. A coil for a wave winding is shown in Fig. 12—*II*.

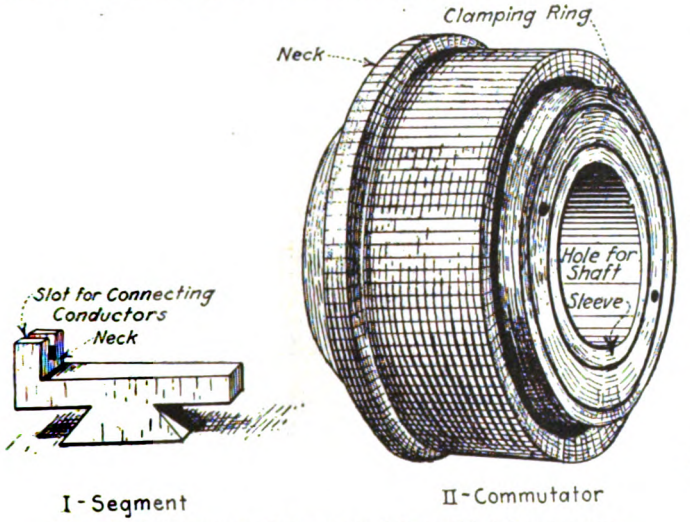

Fig. 16—Commutator Segment and Assembled Commutator

Developments or diagrams of armature windings may be either plane developments, which represent the winding as it would appear (Figs. 19 and 20) if it were unrolled from the core and laid out flat on a plane surface, or star developments (Figs. 21 and 22), which delineate the winding somewhat as it might appear if it were possible to strip it from the core and flatten it out by a

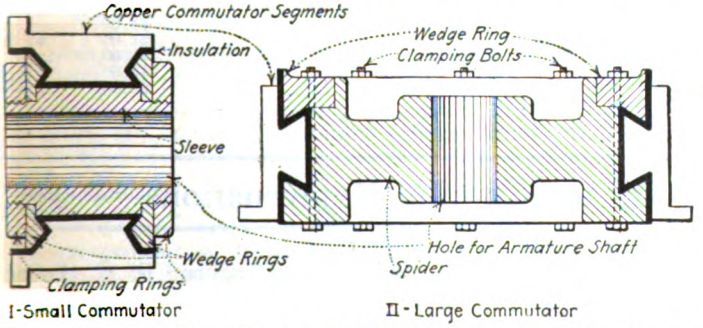

Fig. 17—Sectional Views Illustrating Typical Construction of a Small and a Large Commutator

pressure applied along the axis shaft of the armature core. A plane development has the disadvantage that it does not show the armature-conductor circuits as entirely closed. In the star development this disadvantage is corrected.

The plane development of a lap winding for a four-pole generator is shown in Fig. 19. There are 18 inductors or 9 coils. With the direction of rotation as given, the e.m.f. directions will be as shown (hand rule) by the arrow heads. One side of each coil is under a *N* pole and the other side under a *S* pole. If the winding is traced out, starting at inductor 1, it will be found that all of the inductors are in series and in effect, constitute a closed helix. The e.m.f. directions determine the brush locations. Wherever the e.m.f.s in the two conductors connecting to a segment are directed into or out of that segment, a brush should be located at that segment. The star development of Fig. 21 shows a wave winding, having 32 inductors (16 coils) for a four-pole machine. The e.m.f. directions will be as shown, determining the brush locations at the segments indicated. From this diagram it is readily apparent that there are as many current routes through the armature as there are poles.

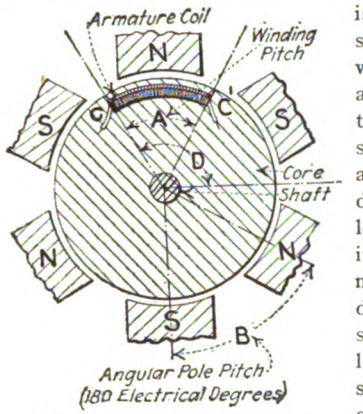

Fig. 18—Showing "Spread" or "Winding Pitch" of a Drum-Armature Coil

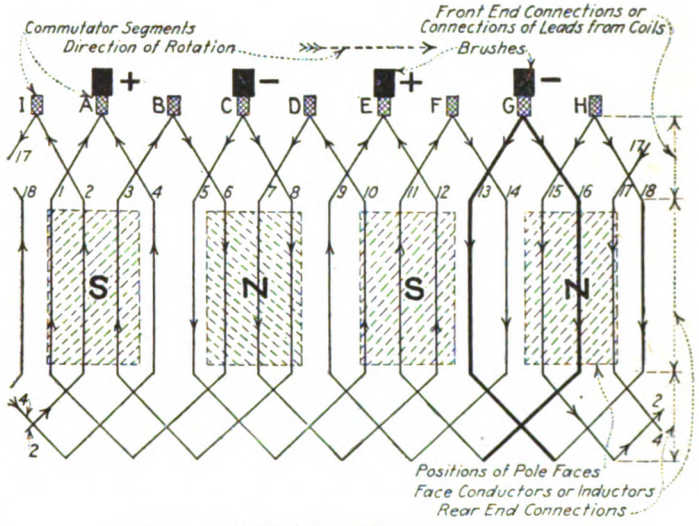

Fig. 19—Lap Winding—A Typical Wind Developed

E.M.F. and Current in a Wave Winding. Consider the diagrams of Figs. 20 and 22. The directions of the e.m.f.s in the inductors (shown by the arrow heads) directly under the poles

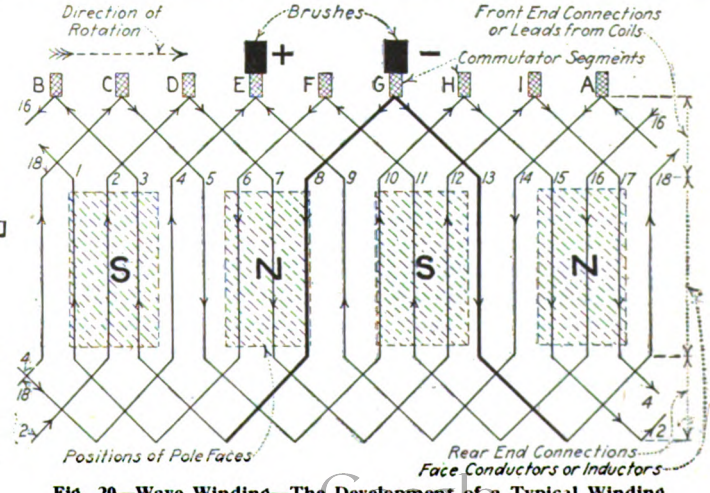

Fig. 20—Wave Winding—The Development of a Typical Winding

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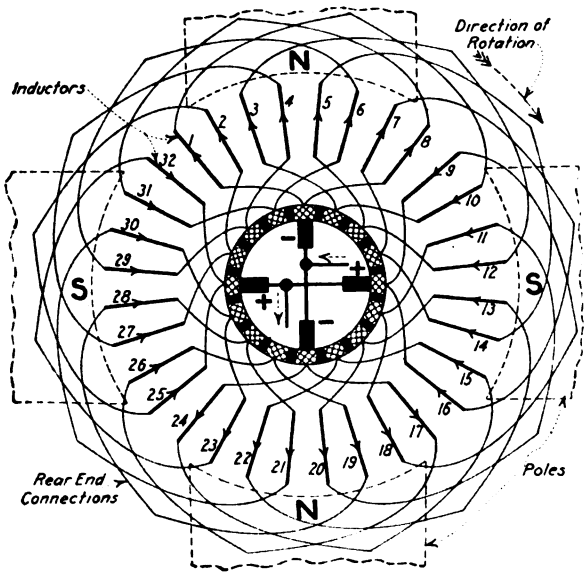

Fig. 21—Lap-Winding for Drum Armature Having 32 Inductors (16 Coils)

can be readily determined (hand rule) and those in the other conductors must correspond. Only two brushes (B and B_2, Fig. 22) are necessary, but brushes may be and are, where the total current is large, located at each neutral plane. All of the conductors are in series and there are really, regardless of the number of brushes used, only two current paths through a wave winding.

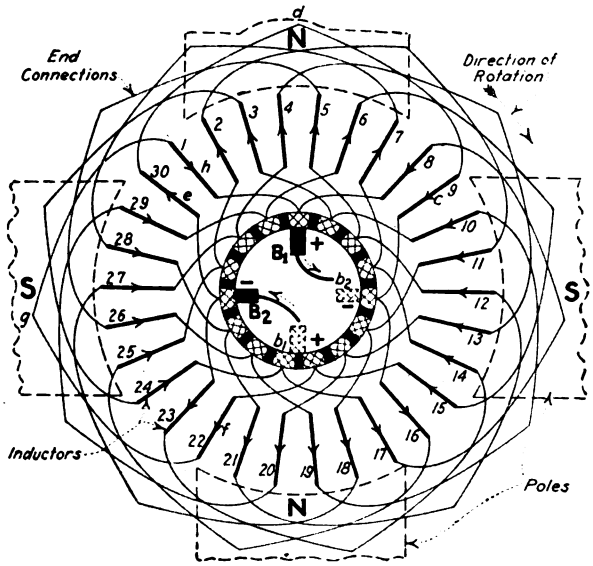

Fig. 22—Wave Winding for a Drum Armature Having 30 Inductors (16 Coils)

NOTE.—Why the addition of two more brushes, b and b_2, at the neutral planes in Fig. 22 will not affect the situation, may be explained thus:—The added brush b_2 is, at the instant shown, in metallic connection with B_2 through the low resistance path $b_2\ c\ d\ e\ B_2$ provided by this armature coil. The effect is the same as if B_2 and b_2 were the same brush. Furthermore, b_1 and B_1 are connected directly by the coil $b_1\ f\ g\ h\ B_1$, producing a similar condition. The generator would also operate as well if b_1 and b_2 were provided and B_1 and B_2 omitted as when only B and B_2 are used. In practice, where only two brushes are used, they are usually located above the horizontal diameter of the commutator, in which position they will ordinarily be most accessible.

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Coming Rejuvenations

January—Mansfield, Ohio. First Tribune, F. C. Poling, Po. 15317, care Electric Company.

January—Newark, Ohio. First Tribune, E. A. Sims, Po. 5968, care Avery-Loeb Electric Company.

January 19—Joplin, Mo. First Tribune, C. C. Henderson, Po. 6249, P. O. Box 302.

March 17—Louisville, Ky. First Tribune, Robert Montgomery, Po. 6147, care Louisville Gas & Electric Company.

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JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, N. Hanley, Po. 14372, 10 West Portage street, Cuyahoga Falls, Ohio.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, C. O. Nichols, Po. 15537, care Benton Harbor & St. Joseph Railway & Light Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, F. A. Coupal, Po. 584V, care Buffalo General Electric Co.

CHATTANOOGA—Wednesday, 12 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, L. C. Spake, Po. 15397, 1570 Old Colony building.

CINCINNATI—Monday, 12:30 p. m., Hotel Metropole. Chairman, A. M. Wilson, Po. 14357, care University of Cincinnati.

CLEVELAND—Regular meeting, Thursday, 12 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12 m., alternately, at different hotels. Secretary, O. N. Rhoades, Po. 12702, care Columbus Railway, Power & Light Co.

DALLAS—Friday, 12:15 p. m. J. H. Moseley, Po. 11186, care Texas Power & Light Co.

DAYTON—First and third Mondays of each month, 12 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Co.

DENVER—Wednesday, 12:15 p. m., Kaiserhof Hotel. Secretary, Benedict Shubart, Po. 3496, 620 Boston building.

DETROIT—Saturday, 12:30 p. m., Grill room, Board of Commerce. Secretary, R. J. Kirchner, Po. 5199, care General Electric Co.

EAU CLAIRE, WIS.—First Monday each month. Secretary, Gurth Williams, Po. 18268.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Co.

GALVESTON—Meet on call. Secretary, Howard Jolly, Po. 16826, care Postal Tel. Co.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, George Cotton, Po. 10089, City Hall.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Co.

HUNTINGTON—Last Friday each month, Huntington Hotel. Secretary, H. A. Haddox, Po. 9164, 1116 Fourth avenue.

INDIANAPOLIS—Monday, 12:15 p. m. J. H. Albright, Po. 12484, care Indianapolis Light & Heat Co.

KANSAS CITY—Every other Friday, 12:15 p. m., Sexton Hotel, Secretary, L. E. Shoemaker, Po. 19190, 660 Gates building.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Co.

LOS ANGELES—Wednesday, 12 m., Jahnke's Tavern, 534 S. Spring St. Secretary, Clifton Peters, Po. 12734, 108 Edison building.

LOUISVILLE—Tuesday, 12:15 p. m., Watterson Hotel. Secretary, Paul Tafel, Po. 13337, 236 West Jefferson street.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel.

MILWAUKEE—Tuesday, 12 m., Maryland Hotel. President, H. J. Meyer, Po. 7365, care Vaughn-Meyer, Majestic building.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later).—Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Co.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne St., New Orleans, La.

NEW YORK—First Wednesday of each month, 12:15 p. m., Browne's Chop House, 1424 Broadway. Secretary, Jas. R. Strong, Po. 742-4, 114 West Thirtieth street.

OKLAHOMA CITY—Monday, 12 p. m., Skirvin Hotel. Secretary, O. T. Jenkins, Po. 14273, care Nunn Electric Co.

PEORIA—First and third Saturdays of each month, 1 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Co.

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PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's restaurant, Kellog street. Secretary J. O. Roser, Po. 10412, care General Electric Co.

RICHMOND—Third Wednesday of each month, Business Men's Club. H. W. Hall, Po. 370, care Western Electric Co.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Co.

SACRAMENTO—Saturday, 12:15 p. m., Peerless Cafe. Secretary A. E. Brockway, Po. 6039, 3431 Sacto avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Co.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Ridpath, Po. 7739, 505 Rialto building.

SPOKANE—First and third Wednesdays of each month, 12 m., Davenport's Hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Co.

ST. LOUIS—Tuesday, 12:15 p. m., American Annex. Secretary, Geo. McD. Johns, Po. 9052, Room 401 City Hall.

ST. PAUL—First and third Thursdays of each month, 12:10 p. m., Emporium Tea Rooms. Secretary, A. L. Frankenburger, Po. 5289, care Western Electric Co., 235 East Sixth street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Co.

WICHITA—First and third Mondays of each month, 12 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Co.

WINNIPEG—Every other Wednesday, 12:15 p. m., St. Regis Hotel. Secretary, W. H. Reynolds, Po. 4388V, care E. F. Phillips Electric Works, 602 Electric Railway Chambers.

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NEW JERSEY
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TENNESSEE
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DREES, C. J., Po. 1572, First Tribune, care Arkansas Electric Co.....Little Rock
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LONG RATE WAR ENDED BY PURCHASE OF ALASKAN COMPANY

A RATE war that has been in progress for nearly four years at Valdez, Fort Liscom and points in that vicinity was recently brought to an end by the purchase of the Illes Hydro-Electric Company of Valdez, Alaska, by the Prince William Sound Water, Power, Light & Telephone Company. The price, it is understood, is approximately $100,000. .

The Prince William Sound Company was organized in 1915, and was virtually a consolidation of the old Alaska Water, Light & Telephone Company, and the Valdez Electric Company. A little over four years ago the company started to build a hydro-electric plant. Previous to that time it had leased its power from the Illes Company. In rebuttal the Illes Company organized a consumer's company, called the Valdez Electric Company and the rate cutting war started. The rate cutting was continued until the Valdez Electric Company was taken over by the Alaska Water, Light & Telephone Company. Both plants will be operated for awhile but they will eventually be consolidated.

* * * *

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DIELECTRIC MFG. COMPANY, St. Louis, Mo.

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FOR SALE—The undersigned has, at Hickory, N. C. the Generator No. 1, 3 kw., made by Edison—"Edison, Electric Light Co., Pat. Dec. 22, 1879, Builders, New York, U. S. A., No. 56." "Edison Machine Works." The last time it was tried, which was several years ago, it operated. Having no other use for it, only as a souvenir, and being suddenly rendered more in need of funds than souvenirs; he very much desires to sell it to some one who can and will preserve it. M. E. Thornton, Po. 5273V, P. O. Box 448, Hickory, N. C.

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THE JOVIAN

Volume Eleven FEBRUARY, 1917 Number Three

RELATION BETWEEN THE SOCIETY FOR ELECTRICAL DEVELOPMENT AND THE JOVIAN ORDER

Address Before the Indianapolis Convention.

By J. M. Wakeman, Po. 524, Fifth Apollo.

WHEN I read in "The Great Task of Jovianism" this sentence referring to the Jovian Order and the Society for Electrical Development: "With the sphere of usefulness of each clearly defined, with each receiving full credit for its accomplishment, with consequent removal of the last shred of jealousy, each working for the other and both coordinating effort and concentrating resources along the line of greatest efficiency, there lies before both bodies a great and good work and an industry a unit in their support." I felt that the time had passed when Jovians regarded the Society for Electrical Development as a possible competitor. Thanks to the clear-sightedness and broadmindedness of those at the head of both these organizations, we have taught, tested and proved the truth that we are natural co-operators—the one with the other — and both with everyone in the electrical industry.

Happily, today, the head of both these great organizations is one, a man known throughout the industry as a true apostle of co-operation. Not only is Jupiter Henry L. Doherty the President of the Society for Electrical Development, but on the Society's Board of Directors, we find W. E. Robertson, J. Robert Crouse, Thomas A. Wynne, all Past Jupiters; we have had on the Board Frank Watts, Homer E. Niesz and W. N. Matthews, all Past Jupiters, in fact by an action of our Executive Committee, the Reigning Jupiter is always a member of our Board, and we still have such prominent Jovians as James R. Strong, John F. Gilchrist, L. A. Osborne, W. A. Layman, Charles W. Price, Frank S. Price, Joseph E. Montague, H. B. Crouse, G. M. Sanborn, Ernest Freeman, Earnest McCleary, W. H. Johnson, Gerard Swope, Fred Bissell, all devoting time and thought to the Society's work as Directors.

The staff is also made up of Jovians, three of the staff being statesmen-at-large. Personally, my Potential is No. 524, and I served upon your Executive Board ten years ago, so you see that the Society is in full sympathy and accord with the Jovian Order. There is every reason why we should work together. The Jovian Order has, as its slogan "All together, all the time, for everything electrical." Distinctly a message to the men in the industry. The Society's slogan, "Do It Electrically," is just as distinctly **not** addressed to the industry, but to the great public, upon whose patronage the industry depends for its existence, and in serving whom the industry justifies its existence.

A business engaging more people than all the other manufacturing interests in the country engage, an industry which has over eight billion dollars invested in it, does a business of over two billion dollars a year, over six million dollars a day, supports nearly five million people and serves over seventy millions, is one which needs a big co-operative order within itself, and a big co-operative Society to reach out to the public and stimulate them to a proper appreciation of its importance in the every day life of the home, the factory, the mill, the shop and the farm. This is why the Jovian Order and the Society for Electrical Development are both necessary to the welfare of the industry, and why they can both find plenty of good, useful work to do, each in its own sphere, without in any way duplicating each other's work, or clashing in their interests.

The membership of the Society is made up of firms and corporations who contribute money with the idea of diverting at least a portion of the vast sums spent in wasteful competition for existing trade into creative efforts in now undeveloped markets, and, as I pointed out before, the men who direct the expenditure of the Society's money are Jovians.

In the Order, the members are individuals, who give their time rather than their money to the cause. To me these two organizations represent co-operation to the ninth degree.

Take as a timely example of how we can co-operate, the great campaign of America's Electrical Week. In every city of 10,000 and over and in many smaller cities, there are local committees in charge of this great trade campaign. In every case Jovians are serving upon and in most cases directing these local committees in their work.

I am trying to point out why the Jovian Order and the Society for Electrical Development are by their very character natural co-operators and to bespeak the co-operation of every Jovian with the Society in its work, not only in this special campaign work, but in its regular every day business of stimulating the public demand for everything electrical. The Society's staff writes advertising copy, writes business stimulating letters, prepares attractive window displays, collects and distributes selling ideas, prepares and distributes booklets on wiring campaigns, on electrical range selling, on electrical shows, collects data on rates, on ordinances, on sign regulations, etc. It is prepared to help its members in any or all of the above ways, besides which it supplies the daily newspapers, the popular magazines, the trade press and the farm journals all the time with stories and articles pointing out the many uses and the great convenience of the wonderful genie "Electricity." Even our poster conveys the story that the modern Aladdin, by pressing a button, summons a greater genie, a far more wonderful servant than did his ancient prototype when he rubbed his famous lamp.

In selecting that poster, we brought together the greatest collection of commercial art ever seen in the world's history. It has been exhibited in New York, Chicago, New Orleans, Philadelphia, Baltimore, Atlantic City and is going to Cincinnati, Toledo, Cleveland, Pittsburgh and other large cities. The newspapers have devoted thousands of dollars worth of space to it, because of its news interest. Artists have been led to realize how important a part electricity plays in the world and have learned to embody it in their designs. The public have been interested by them, thousands have seen them and every word of publicity given them has been good for this industry, good for **you**, every **one** of you.

The other day I was in a railroad station and saw a man tacking a label on a box. It was an easy job, and he drove the tack with a small hammer held in one hand. I turned and saw a track laborer driving a spike into a railroad tie, — it was a hard job — needed a big sledge hammer — and required both hands.

Developing this great electrical industry is no tack hammer job. It is a big two-handed job. The Jovian Order and the Society for Electrical Development are the two hands needed and there is no more competition between them than there is between the two hands of the man wielding a sledge hammer. They must work together to successfully accomplish their purpose.

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

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Past Jupiter Thirteen, Chicago, Ill.

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Past Jupiter Fourteen, Indianapolis, Ind.

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CHARTERING JOVIAN LEAGUES

Distinct Advantages to the Local and National Bodies and the Industry.

Why and how it Shall be Done.

IN accordance with the present Constitution The Jovian Order is now composed of two major classes of members, to-wit, "League" and "Non-League."

A "League" member is a Jovian who is a member in good standing of a Chartered Jovian League. He makes one payment of dues, to his league's secretary, which includes his league and his national dues. His national dues are forwarded to the Jovian Central Office by his league.

A "Non-League" member is a Jovian who is not a member of a Chartered Jovian League. He makes payment of his national dues direct to the Central Office.

The national dues of each class are in the same amount of four dollars.

The national body allows a Chartered Jovian League a collection fee of fifty cents for each of its members for whom it remits to the Central Office.

A Chartered Jovian League may, within its discretion, include upon its rolls members who are not Jovians. Over those members The Jovian Order exercises no jurisdiction (excepting only as they might affect fundamental Jovian principles), and a League makes no payment to The Jovian Order in their account.

A Chartered Jovian League in no instance obligates itself for or makes dues payment to The Jovian Order for any of its members who are not Jovians.

Nor does it obligate itself for dues payment to The Jovian Order even for its Jovian members unless it has expressed a desire so to do by certification of its secretary at certain stated periods.

In the event a Chartered Jovian League certifies to, and pays, to the Central Office dues for, a member from whom it later is unable to reimburse itself, upon proper certification to that effect The Jovian Order will allow a corresponding credit upon the next following dues settlement from that League requiring only that the delinquent member be dropped.

A League may attain a Charter by, quoting from the Jovian Constitution: "Application * * * to Mercury on a blank furnished by him and filled out, by the Jovian officer making said application, with certified statements that Charter members have been secured of a number not less than fifteen; that officers have been elected; that the League if granted a Charter will be found, in all things, not contrary to law, by this Constitution; that its members understand that it has a moral and financial responsibility to the community and to The Jovian Order, and accept the obligation to fulfill it; that it has adopted a Constitution conforming with the requirements of a "Model Constitution" (furnished by the Central Office) with respect to not less than the provisions of same governing—

1. Name of League.
2. Objects of League.
3. Qualifications for Membership.
4. Dues to Central Office.
5. Territorial Limits.
6. Reports to Central Office.
7. Such other reasonable data as Jovian Congress may require."

The officers of The Jovian Order in applying the provisions of the new Constitution, requiring that Leagues secure a Charter before using the name "Jovian," the Jovian slogan, and Jovian Central Office Service, have declared that no arbitrary and destructive policy will be used by them.

In no event will any action be taken with reference to the relations between any League and the Jovian Order, until those in management of the League are consulted and some mutually satisfactory arrangement completed.

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The Jovian Administration realizes that this new law is a radical change from old rulings, and that, in fairness and for the best interests of the Order, ample time must be given established Leagues to work out the problem of complying with the new requirements, without disrupting their present organizations.

Let us consider now: the need for chartering—in other words, for federalizing local organizations; why a local league is not sufficient unto itself; the value of federalization to the league, to The Jovian Order, to the electrical industry and to the individuals concerned with each, and the obligation of each to the other.

First, the lesson taught by precedent is all one way in this matter. There is not in existence one fraternal or commercial organization of national scope, in which the plan of federalization as covered by the new Constitution, or in a similar manner, is not successfully in force.

The Rotary organization operated for a time in the manner that some Jovians desire The Jovian Order, or at least electrical clubs, to adopt. They attempted a chain of independent local clubs without a connecting link, but soon found that maximum usefulness could only be attained through a Central Clearing-house, which all local clubs combine to support.

A Pittsburgh member, writing in support of federalization, aptly states: "I am sure that a headquarters will have to be suitably maintained in order to conserve the word 'Jovian,' standardize membership and procedure, avoid duplication of leagues, and in all ways work toward their success."

It is essential that every well-informed Jovian use his utmost endeavor to correct, in the minds of some few members of the electrical fraternity, a thought that, while not matured nor well defined, might, if allowed to feed unmolested upon insufficient information, prove an obstacle in the plan of efficient organization for the development of the electrical industry. We refer to the error of believing that a local body is sufficient unto itself and is without the need of affiliation with and suggestion from a centralized group of individuals representing equally it and other similar local bodies.

As the first and most essential element making for a lasting and satisfactory understanding between contracting parties is one of reciprocal benefits, we are assured that fundamentally we are correct in standing for centralized power for the direction of the activities of local electrical leagues, because there are distinctive advantages to all individuals and bodies concerned in an agreement of that nature.

Before we proceed to consider those mutual benefits let us assure ourselves that we accurately interpret the status of this centralized power, or International Jovian Congress and Headquarters, which is what we actually have under discussion.

Let us start right by immediately purging from our minds any feeling that Congress and Headquarters form a body separate. That they are truly and simply but a part of the one great plan, not devoted to one geographical section more than another, nor to one league more than another, nor to one individual, nor group, more than another, is certainly proved by the fact that the former is made up of selections from here, there and everywhere, representing perhaps successively every local electrical league in existence, and the latter is by our Constitution restricted not at all as to location nor as to the individual who may direct it.

With that fact established to the satisfaction of every logical intellect, let us, therefore, in considering this question, if there can be a question, of the advantages of affiliation other than one purely local in character, not confuse the issue. The query then, is not—is it worth while to work in close contact with Jovian Congress and Headquarters, considering them as a body apart—but, is it worth while for this league through the Connecting Link afforded by Jovian Congress and Headquarters to synchronize and standardize methods, exchange experiences and work on matters of national import simultaneously and as a unit with one hundred and more similar local organizations, spread throughout the length and breadth of the land, whose problems, ideals, ambitions and reasons for existence are, practically speaking, identical with ours.

Viewing the matter in that light, which truthfully bares the real facts involved, it seems almost superfluous to state the accruing benefits, of an affiliation more than local, when they must be so obvious to everyone.

There assuredly can be no question of the established principle that in union and harmony there is strength, efficiency and maximum possibilities for effective, constructive effort, and that the greater, the wider spread the union and the harmony, the greater in exact ratio the possibilities and realization.

A local organization may not alone accomplish these things for the same reason that, as someone said, a woman may not drive a nail with an ivory-back hair brush—the overhead expense makes the result undesirable.

But a local organization may reasonably, and economically, and helpfully deliver its mite of suggestion and funds to a central point (representing it equitably with all the rest) there to be concentrated with numerous other units, the whole forming a power irresistably constructive and returning to each mite contributor the cumulative value of his and all the other mites combined.

Or, we may legitimately compare the local league that joins hands in the bigger scheme, with one who through the payment of a nominal fee of a dollar or two has thrown open to himself membership in a library of thousands of books, and the experience and knowledge of thousands of men who worked for the same purpose for which he is striving.

And we may consider that the local league that combines with a hundred other leagues through the centralized, representative body, and throws into the melting pot for ideas established there the thoughts it develops, holds license for the free use of those plans which remain after the ladle of analysis and test has skimmed away the froth from thousands of the experiences of others.

Shall we doubt that the opportunity for close touch with, and intimate knowledge of, any question as solved or attempted to be solved by a hundred local leagues in all parts of a nation will broaden our viewpoint, give us a better grasp and clearer insight into our local problem and aid us greatly in meeting it? Assuredly not. Yet the man who thinks he requires only his local atmosphere, in effect subscribes to such a doubt.

Even were a local organization financed, and bulwarked with active workers, to an extent where it might without disastrous effect attempt the constructive work possible with a centralized power representative of thousands of individuals and a hundred local leagues, it could not possibly attain even approximately as satisfying results for its own advancement and the good of the industry for which it stood. That is just as true as the fact that a million pennies given from the hands of a million interested men will accomplish more than ten thousand dollars from the store of ten such men—for they represent exactly the same total, and in addition, are backed by the actual and tangible as well as the moral and psychological strength given by large numbers of men thinking along parallel lines.

The best proof of the value of the principle of centralized direction of local effort is in the wonderful achievement of the Jovian Leagues now in existence (even in their present state of underdevelopment and lack of standardization) in every movement thay have undertaken as a unit under the suggestive influence of the central body. And there have been few, if any, widespread movements of a constructive nature, in the electrical industry in the past three years, in which The Jovian Order and its leagues have not been requested to participate and have not given the best that they had. They have conclusively proved, beyond the possibility of contravention, the benefits of both the local body and the industry at large by close co-operation each with the other through the medium of directive authority concentrated within a small representative body.

The electrical industry urgently requires, in every city in which it is represented to a great enough degree to justify the effort, a local electrical league taking a leading part in the affairs of its city, actively co-operating with other local business organizations to an

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extent where it gains the respect of and becomes a power in its community.

If the industry needs this for no other reason than that it will cause it to take its rightful place as a great factor in the development of any city, with particular relation to public utilities and the misunderstanding of their ideals and purpose by the people, our statement would be fully justified.

Our industry needs, more than it needs many other things to which it is giving more of its attention, that these leagues be operated on sound policies, with proven, standardized methods of efficiency; that they be properly financed and directed, and that on questions of larger moment, where all interests are alike, that they act simultaneously, hitting hard and often with behind every blow the tremendous power of a hundred and more bodies united.

The Jovian Order has blazed the way for the realization of this greatly-to-be-desired condition. It is now devoting itself heart and soul to an early consummation, and needs only that it shall not be misunderstood, that it shall not be hampered by any misconception of its purposes and that it shall have the big-minded, broad-gauged, far-seeing co-operation of those leagues now in being and to be formed.

May it have those things until its measure of satisfaction, for a great and good work well done, shall overflow and forever quench the insidious fires fed by those restless unfortunates who are cursed with a doubting soul.

Co-ordination of the policies, plans and efforts of our Jovian Leagues is a vital prerequisite to the performance of the great work to which The Jovian Order is addressing itself,—the accomplishment of harmony and constructive endeavor, in a word, co-operation, in the electrical industry.

To concentrate upon the upbuilding of the industry all the thought and endeavors of the individuals and interests that constitute it, is the only object of the proposal to unify the purposes and standardize the methods of these Leagues.

When this object and its advantages are thoroughly understood, the result will be general approval and active support of the whole plan. Of this we feel certain.

In short, then, it is purposed only to federalize the Leagues upon the system of the American Union and the Canadian Confederation. Without losing their respective identities or independence, without sacrifice of interest, initiative or free participation in purely local affairs—electrical or civic—the Leagues at the same time will be parts of the whole, with the strength of the entire international organization behind each of them.

In all this there is but one important limitation; namely, that chartered Leagues shall be subject to The Jovian Order's Constitution and By-Laws in matters affecting the fundamental principles of effective, united effort, just as the states of the American Union and Provinces of Canada are bound by federal constitutions.

In no conceivable manner can this plan result in an attempt, on the part of the Central Body, to dictate to the Local Body relative to matters which legitimately belong within the discretion of the latter. The intent, spirit, letter and slogan of the movement is: "Helpful Suggestion Not Meddlesome Interference."

* * * *

SNAP SHOTS WANTED

The JOVIAN will be glad to publish each month snap shots of Jovians and of Jovian affairs. Those pertaining to the humorous features as well as ones depicting something unusual are desired. Members sending photos should be sure names and addresses are plainly written if they wish photos returned. We will exert every reasonable effort to return them in good order, and will reproduce as many as the space available for the purpose will permit.

CHARTERED LEAGUES

Cincinnati has applied for Jovian Charter . . No. 1

Kansas City, Missouri, has applied for Jovian Charter . . . . . No. 2

Pittsburgh has applied for Jovian Charter . . No. 3

Minneapolis has applied for Jovian Charter . . No. 4

St. Joseph, Missouri, has applied for Jovian Charter . . . . . No. 5

Louisville, Kentucky, has applied for Jovian Charter . . . . . No. 6

More Are Coming!!!

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PERSONAL POINTERS

Life's mutations, evoluting,
Whirl in eddies, ebb and flow,
With the purpose of recruiting
Those above from those below.

L. W. Beattie, Po. 15864, of New York City, was recently appointed chief electrician of the U. S. S. Delaware and joined the crew of that warship at Norfolk, Va.

* * * *

L. E. Mohrhardt, Po. 17272, formerly salesman for the Southwest General Electric Company, at Houston, Texas, has been transferred to the Tulsa, Okla. office of that company.

* * * *

W. R. Phipps, Po. 10676, general manager of the Brush Electric Company, Galveston, Texas, was elected a director of the Galveston Commercial Association at a recent meeting of that body.

* * * *

R. L. Cunningham, Po. 4779, formerly with Walker & Keplar, recently severed his connection with that firm and is now with J. F. Buchanan & Company, 1719 Chestnut Street, Philadelphia.

* * * *

C. E. Condit, Po. 8711, who was formerly assistant engineer for the Northwestern Electric Company, Portland, Ore., recently accepted a position with the Arizona Power Company, Prescott, Ariz.

* * * *

Raymond S. Metzger, Po. 7765, was recently appointed head of the safety department of the Toledo Railways & Light Company, Toledo, Ohio. He was promoted to the position from that of chief clerk.

* * * *

F. H. Leggett, Po. 9379, formerly Pacific Coast manager for the Western Electric Company, has been transferred to the New York City office of that company, where he resumed duties January 5.

* * * *

John F. Farquhar, Po. 14977, of the commercial department of the Washington Water Power Company, Spokane, Wash., was recently elected associate member of the American Institute of Electrical Engineers.

* * * *

Elliot Reid, Po. 12008, advertising manager of the Westinghouse Lamp Company, was married last month to Miss Gladys Sibley, of Suffern, N. Y. The wedding took place at the home of the bride in Brooklyn.

* * * *

N. R. Noack, Po. 1035, has accepted a position on the sales staff of the Pacific States Electric Company, with headquarters at San Francisco. He was formerly president of the Pierson, Roeding Company of that city.

* * * *

F. P. Lupke, Po. 1451V, was recently appointed general superintendent of the Public Service Electric Company, Trenton, N. J. He was promoted from the position of superintendent of the southern division of the company.

* * * *

P. B. Postelthwaite, Po. 18595, formerly manager of the Cincinnati office of the Wagner Electric Manufacturing Company, is now in charge of the service department with headquarters at the St. Louis office of that company.

MARTIN J. WOLF, Po. 6027V, Fifteenth Ajax, who has just been elected a member of the board of directors and made vice-president of W. N. Matthews & Bro., Inc., St. Louis, Mo. His election to the directorate of the concern comes as an acknowledgment of the valuable service he has given as its general sales manager during the past several years. Jovian Wolf, as chairman of the "One Hundred Point Committee," is performing a service for Jovianism that can not be appreciated too highly by the fraternity. His efforts to advance the interests of the Order has added to his host of friends who will be pleased to hear of his advancement.

* * * *

L. C. Huff, Po. 11627, who for the past six years has been assistant to the chief draftsman of the Union Electric Light & Power Company, St. Louis, Mo., has been promoted to the position of chief draftsman of that concern.

* * * *

C. Nesbit Duffy, Po. 7351, vice-president and general manager of the Manila (P. I.) Electric Railroad & Light Company, who has been visiting friends and relatives in the United States, sailed from Vancouver for Manila Jnauary 25.

* * * *

Max Lowenthal, Po. 6682, who until recently was connected with the Dohrmann Commercial Company at San Francisco, after an extended visit through the East, has returned to that city and opened offices for the United Trading Company.

* * * *

Osca R. Blumberg, Po. 11462, who represents the Chilten Electric Company, The P. & B. Manufacturing Company and the Trenton Porcelain Company, at Detroit, has removed his quarters from the Ford Building to 502 Farwell Building.

* * * *

Richard R. Fishback, Po. 18361, formerly with the Underwriters' Laboratories at Milwaukee, as inspector, is now connected with the sales force of the Allen Bradley Company, manufacturers of electrical control apparatus, of that city.

* * * *

J. W. Bryant, Po. 15460, First Tribune, Syracuse, N. Y., was recently transferred from the Syracuse branch of the Wagner Electric Manufacturing Company to Cincinnati, Ohio. He now has charge of that company's branch in the latter city.

* * * *

Albert Uhl, Po. 1876, recently accepted a position as sales engineer for Henry Newgard & Company, electrical contractors, Chicago. He was formerly secretary and sales engineer for the Goodman Electrical Construction Company of that city.

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SAMUEL G. HIBBEN, Po. 4065, formerly head of the engineering department of the Macbeth-Evans Glass Company of Pittsburgh, and associated with the Westinghouse Electric & Manufacturing Company, recently became identified with the Westinghouse Lamp Company, of Pittsburgh. Jovian Hibben is chairman of the Pittsburgh section of the Illuminating Engineering Society. His headquarters will be at the Pittsburgh office of the Westinghouse Company.

LOUIS LARSON, Po. 17051, manager of the Rochester office of the Robbins & Myers Company, assumed the management of the Buffalo office on January 1. At that date he removed the Rochester office of the company to 740 Elicott Square Building.

* * * *

W. J. DOHERTY, Po. 2918V, Thirteenth Chiron, has removed his store rooms and offices from 11 and 17 Desplaines Street to 618-626 West Jackson Boulevard, Chicago. His new quarters are more commodious and provide better facilities for handling his business.

* * * *

H. C. TURNOCK, Po. 5658, has sold his interest in the Electric Construction & Sales Company, Cleveland, with which concern he was connected as president. He will locate in Los Angeles, Cal., where he will organize a selling force to handle Hudson automobiles.

* * * *

L. A. NOTT, Po. 1992, recently became connected with the K. P. F. Electric Company of San Francisco. He has been associated with the sales department of the Standard Underground Cable Company, in the Pacific Coast territory, for the past twelve years.

* * * *

LIEUT. FRED H. WILLSON, Po. 6011, who was city electrician at Winnipeg, Man., prior to his enlistment, is reported to have been captured by the Germans in an engagement on the western front of the war zone and is now held a prisoner at Bayern, Germany.

* * * *

GEORGE W. CLEVELAND, Po. 3320, who until recently was manager of the Cincinnati Fire Prevention Bureau, Cincinnati, Ohio, is now engaged in fire prevention work in the State of Michigan, with headquarters at the Farwell Bank Building, Detroit.

* * * *

FRED H. POSS, Po. 994, who has been representing the Benjamin Electric Manufacturing Company, of Chicago, in San Francisco since 1905, has been appointed general sales manager of the firm. His headquarters are at the general offices of the company at Chicago.

* * * *

JOHN O. PRESBREY, Po. 5243, whose former headquarters as salesman for the Ivanhoe-Regent Works of the General Electric Company was Cleveland, was transferred to St. Louis, January 1, and placed in charge of territory covering western and southwestern states.

* * * *

R. G. CARROLL, Po. 10627, has been appointed manager of the Key West (Fla.) Electric Company. He was recently acting manager of the Eastern Texas Electric Company, at Beaumont, Tex. He has been with the Stone & Webster Company, of Boston, for a number of years.

* * * *

J. G. BARRETT, Po. 3189, who was formerly with the Ivanhoe Regent Works of the General Electric Company, is now with the Texas Power & Light Company, Dallas, Tex. He will have charge of the illuminating work in the numerous towns and cities where the company operates.

* * * *

E. A. BECHSTEIN, Po. 14892, First Tribune, Sandusky, Ohio, president of the Ohio Electric Light Association was recently elected second vice-president of the Sandusky Gas & Electric Company. He has held the position of general manager of the company for a number of years.

* * * *

C. F. CROWLEY, Po. 12780, was recently made general manager of the Wm. A. Corrao Electric Company of St. Louis. He was formerly connected with Chas. J. Sutter of that city as contracting estimator. His headquarters will be at the offices of Wm. Corrao Company, 1415 Pine Street.

* * * *

VAN N. MARKER, Po. 7189, who was connected with the Chicago office of the Adams-Bagnall Electric Company, of Cleveland, for seven years prior to March, 1916, has been made manager of the Chicago district of that company. His headquarters are at 549 West Washington Boulevard, Chicago.

* * * *

FRANK A. BROOKS, Po. 2611, for the past twelve years connected with the sales department of the Wesco Supply Company, St. Louis, resigned on January 1. He has purchased a controlling interest in the Moon Motor Car Company, Mattoon, Ill., with which he has become actively connected.

* * * *

W. L. GOODWIN, Po. 1038, who was formerly Pacific Coast manager for the Pacific States Electric Company, recently accepted a position with the General Electric Company, at Schenectady. He was guest at a farewell party given at the Claremont Country Club, San Francisco, January 5.

* * * *

H. W. KILKENNY, Po. 3077, Statesman-at-Large for many years, who has been connected with the sales department of the General Electric Company, at Schenectady for a number of years, resigned January 15 to enter into partnership in the firm of H. N. Pervear, manufacturing jewelers, Providence, R. I.

* * * *

SAMUAL B. MOTT, Po. 12568, who has been superintendent of the Noblesville (Ind.) Heat, Light & Power Company for several years, has been made manager of that concern. Prior to going with the Heat, Light & Power Company, he was chief engineer at the Noblesville plant of the National Carbon Company.

* * * *

ELLIOTT REYNOLDS, Po. 206, assistant treasurer and purchasing agent of the Doubleday-Hill Electric Company, Pittsburgh, was married to Miss Blanche Dean Duke of that city on December 27. The wedding was a very quiet one and came as a big surprise to their many friends and acquaintances. The JOVIAN extends congratulations.

* * * *

WALDO TURNER, Po. 5137, for many years vice-president of the Iron City Engineering Company, is now president of the Turner Engineering Company, consulting and constructing engineers, with offices in the Dime Savings Bank Building, Detroit, Mich. The new company reports starting with contracts aggregating about a quarter of million dollars.

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H. H. MAGDSICK, Po. 8910. As mentioned in the January issue of The JOVIAN, Jovian Magdsick had charge of the illumination of the Statue of Liberty. His work in connection with that notable achievement, combined with the feat of flood-lighting the Woolworth Building at New York, has brought him a great deal of distinction

GLENN A. WILSON, Po. 3662, recently resigned from his position as manager of the specialty department of the Cutler Hammer Manufacturing Company in the East, and has accepted a position with the Franklin Electric Manufacturing Company, of Hartford, Conn. He will represent the Franklin Company in Western New York, making his headquarters at Buffalo.

* * * *

WALTER P. SCHWABE, Po. 7604, was recently elected vice-president and a director of the Northern Connecticut Light & Power Company, Thompasonville, Conn. He has been general manager of that company for the past eight years. Previous to his affiliation with the Connecticut company he was district superintendent of the Public Service Corporation of New Jersey.

* * * *

H. W. WISWELL, Po. 3951, who was formerly with the Commonwealth Utility Company, of St. Louis, and was a member of the board of directors of that concern, is now special representative of the Brown & Hall Supply Company of that city. He has been actively identified with the electrical jobbing and manufacturing business in St. Louis for the past fifteen years.

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OSCAR C. TURNER, Po. 333-3V, Past Jupiter Eight, Chicago representative of J. H. Parker & Son, met with a serious accident on December 16, when he was struck and knocked down by a rapidly moving automobile in Chicago. His collar bone was broken and he sustained other injuries of a serious nature that kept him confined in the hospital for several weeks.

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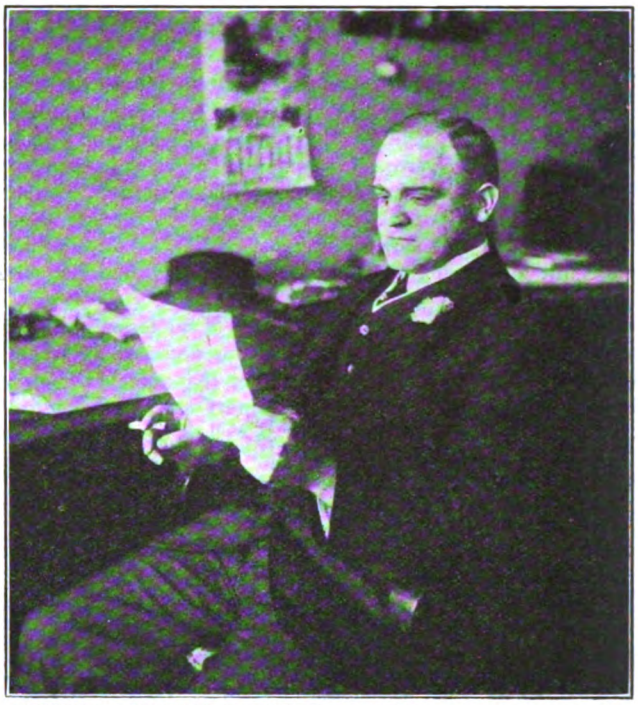
W. E. TRITTIPO, Po. 6926, salesman for the Ivanhoe-Regent Works of the General Electric Company, has been assigned territory under John O. Presbrey, Po. 5243, in the South and Southeast with headquarters at St. Louis. He was formerly with the Cleveland, Ohio, division of the company. His new territory comprises the southern states east of the Mississippi River.



FRANK P. GROVES, Po. 3351, Second Tribune and Pluto on the Philadelphia Degree Team, who has been rendering valuable service to Jovianism

F. R. FARMER, Po. 655, who was until recently vice-president and manager of the Beardslee Chandelier Manufacturing Company, Chicago, is now in charge of the accessories division of the Gibson Company, Indianapolis, Ind. Jovian Farmer's resignation from the vice-presidency of the Beardslee Company did not affect his connection with its board of directors. He continues as a director of the concern.

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J. F. KILLEEN, Po. 5526, Fourteenth Pluto, who has been connected with the General Electric Company, at Pittsfield, as heating device specialist for several years has resigned from that company and assumed the position of vice-president and sales manager for the Rathbone-Sard Electric Company of Albany, N. Y., January 1. Jovian Killeen has an extensive acquaintance in the electrical industry who will be pleased to hear of this recognition of his ability.

* * * *

W. R. WAGGONER, Po. 15825, general superintendent of the Salina (Kan.) Gas & Electric Company, was recently elected president of the Kansas Public Service Association. Jovian Waggoner was graduated from the Case School of Applied Science in 1910, then spent eighteen months in the Doherty apprentice school at Denver. Before going to Salina he was superintendent of the gas department of the Meridian Light & Railway Company, Meridian, Miss.

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E. W. P. SMITH, Po. 14580, city electrician of Cleveland, resigned recently to accept a position as consulting engineer with the Elliott Electric Company, 322 Champlain Avenue, Cleveland. He assumed duties with the latter company January 1. Jovian Smith had held the position as city electrician for three years. He was formerly in the engineering department of the Westinghouse Electric & Manufacturing Company, at East Pittsburgh and later connected with the mechanical department of the Lake Shore & Michigan Southern Railway. He is chairman of the Cleveland Section of the American Institute of Electrical Engineers and a member of the Chamber of Commerce.

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PITTSFIELD ELECTRICAL SHOW A SUCCESS

THE Jovian League of Pittsfield concentrated its efforts towards promoting "America's Electrical Week" celebration around the electrical show held at the Masonic Temple in that city December 4 to 9, inclusive. For some time previous to the opening of the show an extensive advertising campaign was conducted, including both newspaper and poster space on an extensive scale. As the object of the show was almost entirely of an educational nature, the advertising was directed to that end, and the success of the show was very gratifying.

Owing to the fact that Pittsfield is one of the foremost electrical manufacturing cities of the country, it was necessary to make the exhibit an unusually attractive one. For that reason a show was planned that would bring out the newest and most interesting appliances, both practical and novel, as well as the latest and most interesting methods of demonstration. Especial importance was placed on the latter feature and the services of a number of experts were enlisted.

Reports from the management and from the local press characterize it as the most interesting and successful electrical affair ever held in Pittsfield.

A feature that added greatly to the success of the show was the course of lectures arranged by Joseph Insull, Po. 16729, assistant manager, General Electric Company. Following are the speakers and their subjects: W. A. Whittlesey, Po. 18479, superintendent, Pittsfield Electric Company, "Distribution of Electric Energy In and Around Pittsfield;" Kelton B. Miller, publisher, Berkshire Even Eagle, "News of the Day; How It Is Collected and Distributed;" W. I. Mellen, local manager, New England Telephone & Telegraph Company, "Telephone Topics;" Charles H. Wilson, of The J. & E. H. Wilson Company, "Development of the Woolen Industry in the Housatonic Valley, and the Benefit to the Industry from the Use of Electricity;" C. Q. Richmond, manager, Berkshire Street Railway Company, "Street Railway Problems in the Berkshire Hills;" A. N. Saylor, Po. 18476, local manager, Western Union Telegraph Company, "The Wires that Encircle the World."

The decorations of the booths and the plan of arrangement of the exhibits was exceptionally good. In describing the effect the Pittsfield News said: "The hall has been converted into a veritable wonderland for the occasion."

Probably the greatest interest in the show was centered in the demonstration of household appliances, which included everything from toilet articles to laundry equipment. There was an unusual amount of interest exhibited in the demonstration of all articles, and it is felt that the show was exceptionally successful as a means of education.

Jovians in charge announced themselves in favor of holding another show in 1917, but will advocate holding the celebration in the fall, as it is felt both the inclement weather that is likely to prevail during the winter, and the nearness to the holiday season, act as a detriment to obtaining the best results. A movement will be inaugurated in a short time to promote a show to be held next fall.

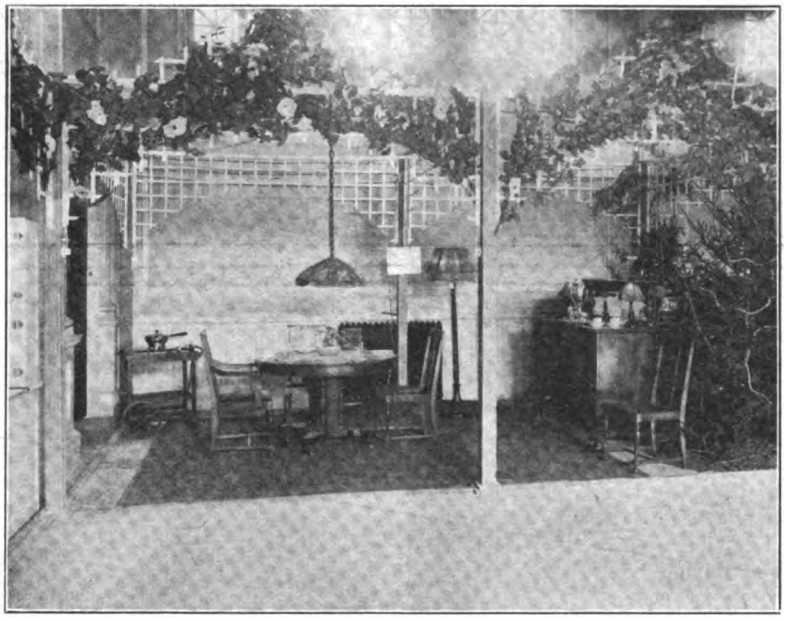
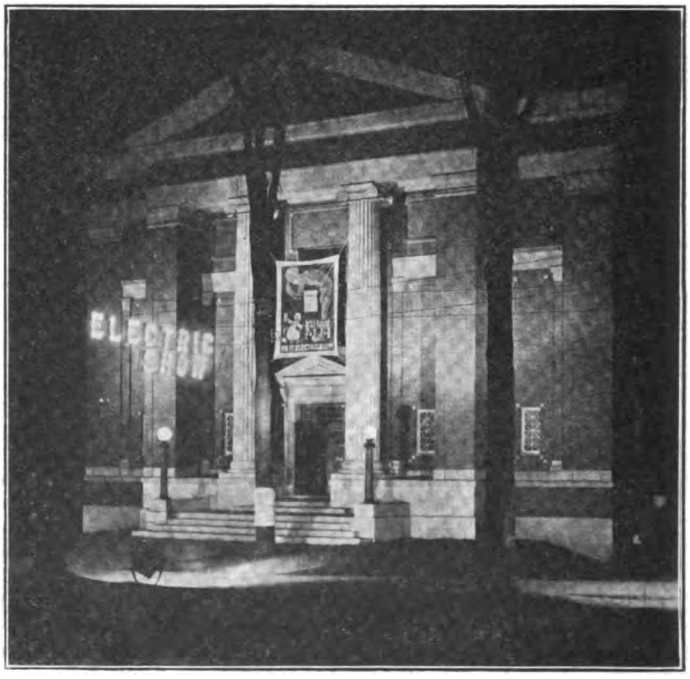


Exhibit Booth, Pittsfield Electrical Show

Exterior of Building Showing Illumination



Exterior of Masonic Temple, the Show Building

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JOVIAN LEAGUE NEWS

DENVER John L. Hunter, advertising expert, delivered an interesting address before the Denver luncheon meeting December 27, on "Salesmanship." The attendance at the luncheon was fifty.

The Jovian League which now forms the Electrical Bureau of the Chamber of Commerce, attended a "Chuck Wagon Dinner" given by that body to visiting stock men on December 29.

R. A. Lewis, Po. 11514, chairman of the entertainment committee, has been very successful in providing interesting speakers for the League luncheons, and promises some good features for the future. Attendance at the meetings is growing steadily.

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DETROIT The annual meeting and election of officers of the Detroit Jovian League was held in the Grill Room of the Detroit Board of Commerce, Saturday, January 6. The following officers were elected to preside during the year. President, F. R. Mistersky, Po. 11208; vice-president, Frank Hilton, Po. 11475; secretary, Oliver Phelps, Jr., Po. 5209; treasurer, Walter D. Gale, Po. 14846; member of the executive committee, R. J. Kirchner, Po. 5199.

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ST. JOSEPH

The annual election of officers of the St. Joseph Jovian League was held on the evening of December 7, resulting in the election of the following members: President, Herbert C. Porter, Po. 3545; vice-president, Walter Blue, Po. 3390; secretary-treasurer, W. R. Thomas, Po. 1489.

An enjoyable banquet and Joviation preceded the election of officers. The hall was beautifully decorated with bunting, Jovian pennants and American flags.

Rev. C. H. Moloney delivered the invocation at the opening of the banquet. At its conclusion Charles E. Foster, Po. 13851, presiding as toastmaster, introduced Jovian Porter, who delivered his official report of the Indianapolis Convention. L. E. Reid, Po. 775, retiring president of the League, then spoke. He advised the League to apply for a Jovian Charter. At the close of his address a vote was taken, resulting in unanimous assent to make application for a charter for the League. Charles D. Fox, Po. 18163, superintendent of the City Light Plant, next addressed the meeting on "The Work Being Done by the Jovians Locally and Nationally."

He was followed by Dr. H. J. Ravold, Po. 19015, who delivered an instructive lecture on the use of the X-ray. Dr. Charles Geiger also delivered an interesting address on the same subject.

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HARRISBURG, PA. The Harrisburg League took an active part in the civic Christmas festivities of the city during the holidays. The members took charge of the work of installing and lighting the Municipal Christmas Tree, under which the various features of the holiday season were held. The League is planning for a big affair in connection with a Rejuvenation that will be held February 15.

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PHILADELPHIA Two good speakers were procured to address the League luncheon meeting December 21. Walter F. Coling, chief executive, and Hayden O. Merrill, field executive, Philadelphia Boy Scout Movement, were the orators.

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MINNEAPOLIS The annual election of officers of the League took place at the meeting on December 20. Those elected were: O. Curtis, Po. 11830, president; Emil Anderson, Po. 7805, vice-president; George S. Blomgren, Po. 6038, treasurer, and Norman O'Neill, secretary. Jovians O. Curtis and Emil Anderson were elected First and Second Tribunes.

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ELIZABETH, N. J.

Elizabeth Jovians held an enjoyable meeting December 6, when the League entertained a number of their friends. An excellent entertainment program, including professional and local talent enlivened the meeting. The principal speakers were C. A. S. Howlett, Po. 279, H. C. Heidrich, Po. 14439, First Tribune J. N. Adams, Po. 18975, and W. J. Miller, Po. 17927. A Rejuvenation was planned to be held in February.

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PITTSBURGH

The regular luncheon meeting January 4, in the Dutch Room of the Fort Pitt Hotel afforded an interesting lecture. Rabbi J. Leonard Levy addressed the meeting, taking for his subject, "A Needed Electrical Device."

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KANSAS CITY Jupiter Henry L. Doherty, Po. 3208-33, addressed the Kansas City luncheon meeting December 21. P. Lloyd Lewis, Po. 6018, president of the League, read an address entitled, "Building a Career," presented by W. A. Layman, Po. 1166V, Seventh Mars, before the Indianapolis Convention. John H. Lucas, Po. 18911, president, Kansas City Light & Power Company, made an interesting address.

January 5 was ladies' day. The luncheon was held in the dining room of the Sexton Hotel.

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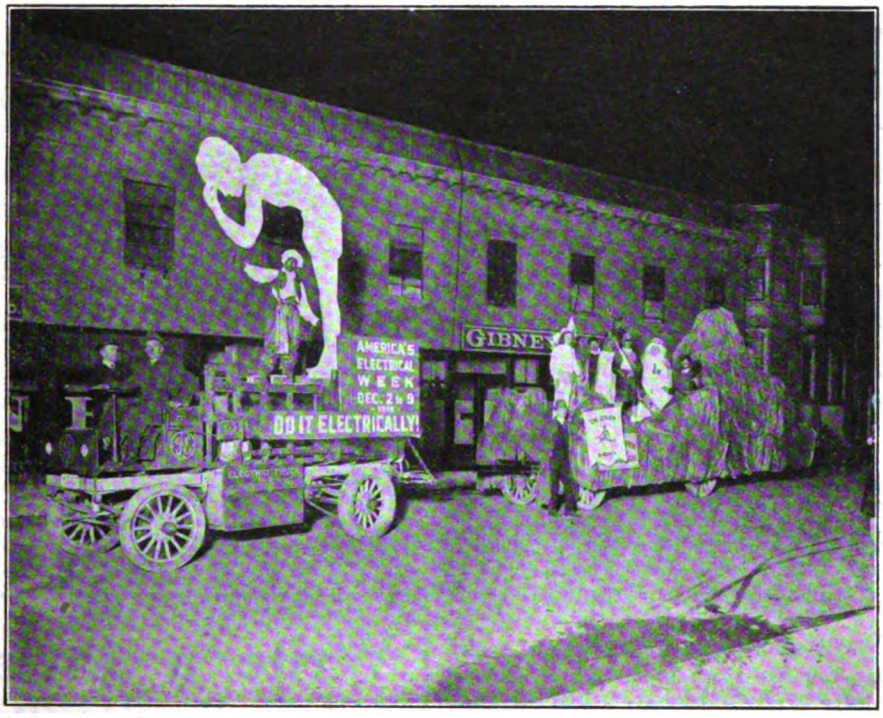
CHICAGO December 14, was election day. Officers elected were: H. A. Mott, Po. 17507, president; B. E. Blandchard, vice-president; George H. Jones, Po. 12259, second vice-president; W. H. Hodge, secretary-treasurer; H. B. Porter,



Jovian Float in the San Francisco Parade Advertising "America's Electrical Week," That Attracted a Great Deal of Attention

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Po. 10982, trustee. While the ballots were being counted five-minute addresses were made by H. L. Grant, chairman of the Chicago A. E. W. Celebration; Homer E. Niesz, Po. 306V, Thirteenth Past Jupiter, Captain Horace Wild, Prof. P. B. Woodworth, Po. 17613, dean, Lewis Institute, Perry Boole, Po. 155, and Sam. A. Hobson, Po. 3, Past Jupiter Three.

Ainslie A. Gray, Po. 2271, managing editor, Electrical Review, in an address entitled, "A Review of the Year in the Industry," presented a review of development which has taken place during the past year in the electrical industry, at the meeting December 21.

H. M. Byllesby, of the H. M. Byllesby Company, addressed the luncheon meeting December 28, on "The Electrical Man's Responsibility to His Country."

January 4, Richard Henry Little, a Chicago newspaper humorist, gave the meeting a treat with his talk, "How to Start the New Year Right."

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NEW YORK Reports of committees were read and the annual election of officers was held at the luncheon at Stewart's Restaurant, New York, January 3. J. M. Wakeman, Po. 524, Statesman-at-Large, presided. The following officers were elected: President, Arthur Williams, Po. 1917; first vice-president, Jas. L. Wakman, Po. 524, Fifth Apollo; second vice-president, Frank E. Watts, Po. 1509-47, Past Jupiter Eleven; secretary, H. E. Cleland, Po. 18656; assistant secretary, J. Lloyd Prince, Po. 4263; treasurer, A. S. DeVeau, Po. 453.

The directors elected were: Jas. R. Pollock, Po. 18675, Fifteenth Vulcan; Jas. R. Strong, Po. 742-4, Sixth Pluto and Seventh Neptune; George Williams, Po. 6849, Fred Hartman, Po. 762, M. A. Oberlander, Po. 2520, Thirteenth Vulcan, and Jas. H. Betts, Po. 6765, Fourteenth Vulcan.

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WINNIPEG Chief Justice Mathers, of the Province of Manitoba, addressed the luncheon meeting at the St. Regis Hotel, January 10. Announcement of the Chief Justice's presence drew an attendance of sixty-three. "National Registration" was the subject of his discourse, which was enthusiastically received. E. H. Smith, Po. 4391, officiated as chairman of the meeting.

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CLEVELAND Dr. Harris R. Cooley, delivered a Christmas message to the Cleveland League, December 21. A special entertainment program, with Miss Helen Cannon in the title role of vocal solist, was an enjoyable feature of the luncheon.

December 28, Charles W. Chestnutt, attorney, author and poet, gave a reading of selections from his compositions. N. H. Boynton, Po. 5604V, president of the League, described the inaugurating ceremonies of the lighting of the Statue of Liberty.

Ted Mercer of New York, a forceful speaker of considerable reputation, was procured by the entertainment committee to deliver the New Year's address for the meeting of January 4. H. S. Greene, Po. 474-2, presided as temporary chairman.

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SAN FRANCISCO Mrs. S. M. Richardson, chairman of the legislative committee, Mother's Congress, addressed the League December 13. Her subject was "Compulsory Military Training in Our Schools."

December 20, Miss Bessie Beatty, of the San Francisco Bulletin, was the principal speaker.

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ST. LOUIS Dr. W. C. Bitting, pastor, Second Baptist Church, delivered his "Christmas Sermon," before the St. Louis League December 19. Jas. J. Dorney, Po. 13687, presided as chairman.

In an address entitled, "A Review of Development in the Electrical Industry During the Year 1916," Ainslie A. Gray, Po. 2271, general manager of the Electrical Review Publishing Company, gave an interesting outline of electrical progress during the past year, January 2. Ell. C. Bennett, Po. 3932-13V, Mercury, was chairman of the meeting.

Jas. E. Allison, consulting engineer, addressed the League January 9. He took for his subject, "The Regulation of Public Utilities." H. H. Humphrey, Po. 9051, presided as toastmaster.

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LOS ANGELES Geo. H. Maxwell, executive director of the National Reclamation Service, was the principal speaker at the luncheon meeting December 13. His subject was "A National Constructive Reserve." Harry B. Lynch, manager of the Public Service Department, City of Glendale, was chairman.

Harry C. Carr, assistant managing editor, The Times, addressed the luncheon meeting December 20, on "America's Position Commercially at the Termination of the War." He was followed by Harry H. Cudmore, Po. 196, Tenth Mars.

C. D. LaMoree, Po. 5104, presided as chairman of the meeting December 27, introducing J. M. Elliott, president of the Board of directors, First National Bank of Los Angeles. The subject of Mr. Elliott's address was "A Few Comments on the Federal Reserve."

John Topham, councilman, City of Los Angeles, and David A. Curry, delivered addresses January 3. The former spoke on "The Trouble Shooter," and the latter, "Our National Parks." T. J. Royer, Po. 16811, wielded the speaker's gavel.

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ST. JOSEPH Forty members were in attendance at the luncheon meeting of the St. Joseph League January 9. H. C. Porter, Po. 3545, presided as chairman, introducing as speaker of the day, Frederick Uhrig. Mr. Uhrig addressed the League on "The Birth and Progress of the Electrical Industry."

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NEW OFFICERS MEMPHIS JOVIAN LEAGUE

AT THE recent election of officers held by the Memphis Jovian League the following members were elected: President, C. K. Chapin, Po. 10600; first vice-president, Burns Stewart, Po. 10606; second vice-president, Jos. A. Fowler, Po. 3283; third vice-president, William Slater, Po. 6667; secretary, Hugh G. Street, Po. 2854; treasurer, Andrew Meyers, Po. 12910.

Write a Jovian Song

The B. H. Stief Jewelry Co.

offers a handsome piece of Jewelry for the best Jovian Song, to be selected by

JAS. A. CAYCE, Po. 2416, and
ELL C. BENNETT, Po. 3932-13V, Mercury

All Jovians are eligible to participate in the contest. Submit your songs, either with or without music to

JOVIAN ORDER
1415 Syndicate Trust Building
ST. LOUIS, MO.

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ELECTRICAL SHOWS

WICHITA'S ELECTRICAL SHOW

ONE OF the most successful electrical affairs ever held in the City of Wichita, Kan., was the electrical show the Jovian League of that city staged December 6, 7 and 8, as a part of the "America's Electrical Week" celebration. Fully fifteen thousand people attended, and the interest taken in the show by the public can be understood from the fact that the 6200 admission buttons that had been made to promote the show were sold before the opening of the doors on the second day.

P. W. Agrelius, Po. 15854, who was in charge of the management of the show, had everything in readiness for the opening on the evening of December 6. The show was formally opened by Mayor O. H. Bentley, who operated a switch that turned on the illumination of one million candle power in electric lights.

A good idea of the arrangement of exhibits and the beauty of the decorations can be had from the accompanying reproduction of a picture of the show.

There was a general expression of praise from those who attended, numerous visitors asserting it was worth a dollar admission price instead of ten cents that was charged.

"America's Electrical Week" was officially opened on the evening of December 2, with the inauguration of the flood-lighting of the Geo. Innes Dry Goods Company's building.

As a final feature of the celebration the Jovian League gave a parade through the business section of the town. The parade was headed by the Wichita Girl's Band, with members of the League dressed in white caps and linen dusters following.

After the parade a Rejuvenation was held, at which Mayor Bentley and other prominent candidates were initiated.

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Wichita Electrical Show Held During "America's Electrical Week"

HOUSTON HOLDS ELECTRICAL SHOW, PARADES AND DRESSES IN JOVE'S GOWN OF LIGHT

AN ELECTRICAL show held at the City Auditorium, a parade and electric lighting demonstrations were the interesting features of Houston's "America's Electrical Week" celebration. Approximately 40,000 people attended the electrical show at which were displayed a great many new appliances. The efforts of those in charge of the show were directed towards producing displays of quality rather than of quantity and the result was in evidence in the interest aroused.

The official opening of the "White Way" was signalized by a parade in which the Texas Avenue Business Men's Association took an active part. One of the features of the parade was an old mule car. It had been mounted on trucks for the occasion and was drawn in the parade by a mule.

The committee active in promoting and managing the celebration: H. O. Clarke, Po. 6629, chairman; A. J. Binz, Po. 921V, Thirteenth Neptune, treasurer; L. H. Johnson, Po. 1016, H. P. Hess, Po. 4981, G. H. Miller, Po. 10666, F. B. Hathaway, Po. 4980, E. F. Hail, Po. 1924, Fifteenth Neptune; H. N. Bates, Po. 1919, C. R. George, Po. 368, A. T. Kuntz, Po. 13016, F. G. Frost, Po. 4015, D. W. Tracey, D. F. Woods, Po. 181, H. M. Newning, Po. 16304, E. E. Reed, Po. 10678, H. K. Humphrey, Po. 16300, and B. W. Glassman, Po. 19075.

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TULSA'S ELECTRIC SHOW PRONOUNCED SUCCESS

THE ELECTRICAL show, held in connection with the "America's Electrical Week" celebration, opened at Tulsa, Okla., on the evening of December 4 with an attendance of 1500. The second day of the show the attendance increased to 2500, and from that day until its close the hall was crowded. More than 15,000 people, over one-fourth of the city's population, attended.

Almost every conceivable appliance was on exhibit. Great care was exercised in arranging the displays, and the effect produced was very gratifying.

Special features attracted a great deal of attention. The Pioneer Telephone Company conducted a demonstration of long distance telephony; the City Fire Department demonstrated an alarm apparatus, and domestic science students from Kendall College served electrically prepared foods.

One of the valuable features in connection with the show was the co-operative spirit of the Jovian Order, demonstrated in its organization and management. Jovianism is taking a strong hold in Tulsa, especially since the advent of Past Congressman E. A. Wilcox, Po. 6830, who is living up to his previous record of Jovian achievement. It is asserting its beneficial influence in the development of the industry in this city.

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SAN FRANCISCO'S CELEBRATION

FOLLOWING a campaign of advertising that has never been equaled on the Pacific Coast, San Francisco held an electric show during "America's Electrical Week" whose complete success was very gratifying to those connected with its promotion and management. Conservative estimates place the attendance during the six days of the show at 17,000.

The show which was under the direct management of the Jovian League and Society for Electrical Development was formally opened on the evening of December 2 by the Hon. Frank Devlin, Railroad Commissioner of California. Following an appropriate introduction by R. E. Fisher, Po. 7389, vice-president of the Jovian League.

The first electrical demonstration was the unfurling of a flood-lighted American flag in the breeze of electric fans while the hall was in darkness. A squad from the National Guard raised the flag and sounded reveille. This produced a spontaneous burst of patriotic applause.

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In the plan of the show much attention was given to the arrangement for the best educational effect. All exhibits were installed by manufacturers and jobbers; appliances being grouped according to kind, regardless of the make.

In addition to the credit due the members of the general committee, The JOVIAN is advised the work of the following members of the Jovian League deserves special mention: E. B. Strong, Po. 998, P. C. Butte, Po. 18927, and R. M. Alvord, Po. 1750, who were on the committee of arrangements; T. E. Bibbins, Po. 857, and C. E. Heise, Po. 7363, of the finance committee; M. S. Orrick, Po. 5886, general chairman of the entertainment committee, and R. E. Fisher, Po. 7389, manager of the show.

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PITTSBURGH JOVIANS TREAT ORPHANS

ONE OF the happiest events participated in by the Pittsburgh Jovian League during the past year, took place at the Fort Pitt Hotel on the evening of December 21, when the League was host to thirty-five orphans. A large Christmas tree had been provided for the little tots and tads who were of the Pittsburgh Sunshine Home. Presents for each child were hung upon the tree, and were distributed by Mark Livingston, Po. 6351, who officiated as Santa. In addition at each child's plate were candy and a pair of mittens.

Rev. Dr. W. L. McEwan, pastor of the Third Baptist Church, made an appropriate address to the children on "The Christmas Spirit." At the conclusion of the address the children sang Christmas carols.

According to the Pittsburgh papers it was hard to determine who enjoyed the affair the more; the children or the Jovians.

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CHICAGO DEGREE TEAM AWARDED PRIZES BY THE LEAGUE

IN ADDITION to the prizes won by the Chicago Degree Team at the competitive drill, at the Indianapolis Convention, three members of the team won the prizes awarded by the Chicago League. The awards were made as follows: F. M. Cockrell, Po. 17356, Jupiter, $25; Harry Neill, Po. 18792, Pluto, $15, and E. J. Reilly, Po. 17538, Neptune, $10.

The prizes were awarded on the basis of the best individual work at the last three Rejuvenations held by the Chicago League.

NEW ORLEANS JUBILEE BANQUET

NEW ORLEANS Jovians held a jubilee banquet at Tranchina's Restaurant on the evening of December 2, that proved to be one of the most enjoyable affairs connected with the "America's Electrical Week" celebration in that city. In addition to a delicious menu, a splendid musical entertainment was provided.

Col. Robley S. Stearnes, Po. 1501, Thirteenth Apollo, presided as toastmaster of the occasion. Those who made addresses and their subjects were as follows: Col. Jos. H. DeGrange, Po. 9192, "Jovianism;" Senator E. M. Stafford, "Commercial Progress of New Orleans"; Hon. Hugh McClosky, Po. 18505, president, American Cities Company, "Public Utilities"; M. S. Sloan, Po. 2700, manager, New Orleans Railway & Light Company, "America's Electrical Week"; J. C. Cremer, manager, A. B. C. Inc., "Co-operation"; and H. D. Emerson, manager, Algiers Railway & Light Company, "Electrical Development".

Songs by Col. Jno. F. Parker, were one of the pleasing features of the entertainment.

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ELECTRICITY PLAYS WONDERFUL PART IN WAR SURGERY

THE WONDERFUL aid electricity, electrical implements and electrical apparatus are lending to surgery in the war zones of Europe is almost beyond belief. Hearing has been restored by vibrations and sound waves in cases that heretofore the science of surgery has held to be hopeless. Sight has been renewed by operations made possible by electric photography, after injuries were sustained that previously were considered fatal to sight. Vibrators are being successfully used in thousands of nervous cases caused by shock, and X-ray machines and electric photography are used in surgical operations of almost every nature.

The necessities to be met by surgery has driven that science ahead to a point of development that it probably would not have attained experimenting in a time of peace in centuries. Implements have been invented, new methods of treatment devised and operations attempted and successfully performed that heretofore have been deemed too hazardous to undertake.

Through it all the use of electricity has grown steadily. Every war hospital is equipped with the valuable aids to surgical and medical treatment the industry is contributing. The value of this feature of science lies, not alone in the fact that it is a great benefit to humanity in its miserable crisis. Its development means a permanent benefit to the human race.

JOVIANS LOOK!

THE Jovian Constitution provides that a ballot be published here on which each Jovian may indicate his preference as to any individual for any elective office. The ballots are to be handed to the Nominating Committee for their information and guidance. Fill it out and mail to

THE JOVIAN ORDER

SYNDICATE TRUST BLDG. ST. LOUIS

THE JOVIAN ORDER
SYNDICATE TRUST BLDG.,
ST. LOUIS

My preference for (state name of office)

---

for the next administration is.....

.....Po.....

(Sign here)

.....Po.....

City..... State.....

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DECEMBER REJUVENATIONS

Indianapolis

ALTHOUGH Indianapolis Jovians initiated eithy-two candidates at the Convention Rejuvenation in October, Wallace O. Lee, Po. 11440, the new First Tribune for the city, came back with a Rejuvenation December 9. Fifteen candidates had filed applications and were present to be initiated. There were sixty-two members in attendance to participate in the affair, which was held at the Indianapolis Athletic and Canoe Club.

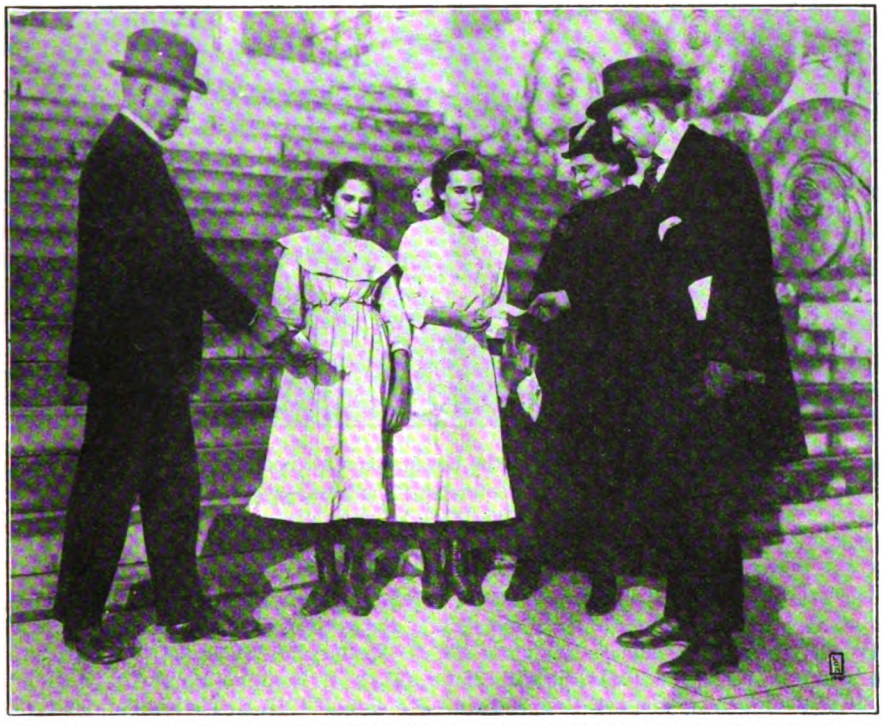
Among the prominent candidates were Prof. P. V. Yennie, electrical instructor at the Technical High School, and H. O. Garman, chief engineer of the Public Service Commission.

At the banquet which succeeded the Rejuvenation, members and guests were seated at a table formed in the shape of a large "J," over which R. P. Oblinger, Po. 4851, Statesman for Indiana, presided as toastmaster.

Addresses were made by Prof. Yennie and C. S. Walker, Po. 4858, Jupiter of the Degree Team. In Prof. Yennie's talk he laid before the meeting a plan for the League to conduct an essay contest among the high school pupils of the city. The suggestion met with unanimous approval, and prizes were offered by the members present to make the contest an attractive one.

Music for the occasion was furnished by the club orchestra and vocal selections were rendered by Miss Helen Monroe in a manner that brought much applause.

As a unique feature, the candidates were driven to the electric show in an ambulance at the conclusion of the Joviation.



The day following the close of the Indianapolis Convention WALLACE O. LEE, Po. 11440, First Tribune, Indianapolis (right), was delegated by CARSON B. HARRIS, Po. 11527, who was awarded the Stutz Car, to present drafts of $50.00 to the little blind girls who aided the Jovians in their entertainment at the German House. The presentation was made in front of the Indiana State Blind Asylum. Mr. Wilson, superintendent of the institution, is the gentleman at the left. The lady is the matron.

Wichita

AMONG the ten candidates initiated at the Rejuvenation held at the A. O. U. W. Hall in Wichita, Kan., December 9, was Hon. O. H. Bentley, mayor of the city. There were thirty-eight members present to participate in the Rejuvenation and Joviation, which were preceded by a parade through the city.

The notable guests present were J. E. Taylor, Po. 15570, Statesman for Kansas; V. L. Crawford, Po. 464, Pittsburgh; Wm. Cates, Po. 17862, Hutchison, Kan., and W. R. Waggoner, Po. 15825, Salina, Kan.

Jas. L. Harvey, Po. 6564, First Tribune, officiated as toastmaster of the Joviation. Mayor O. A. Bentley made the principal address.

The Degree Team that conferred the initiation: L. O. Ripley, Po. 7042, Jupiter; S. G. Nease, Po. 15818, Neptune; C. A. Stanley, Po. 17873, Pluto; J. L. Harvey, Po. 6546, Vulcan; W. E. Lavenburg, Po. 16346, Mercury; J. E. Taylor, Po. 15570, Hercules; F. E. Barr, Po. 15855, Mars; A. Snell, Po. 16347, Apollo; E. P. Violette, Po. 15858, Avrenim, and L. J. Blevins, Po. 15804, W. E. Ross, Po. 14804, Dwight Chapin, Po. 15807, and J. J. Asher, Po. 18709, Imps.

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Los Angeles

WITH sixty candidates to initiate, numbered among whom were some of the city's most prominent electrical men, the Los Angeles Jovian League held a successful Rejuvenation and Joviation at the Elks Club, December 8. There were one hundred and thirty members present to aid in conferring the initiation and to participate in the festivities.

Among the prominent candidates were Willis H. Booth, vice-president, Hotpoint Electric Heating Company; A. B. Miller, president, Fontana Land Company and the Fontana Power Company; Ernest Ingold, manager, Electric Equipment Company, and Gilbert S. Wright, president, Wright-Callender-Andrews Company.

There were an unusually large number of prominent members in attendance, included among whom were: R. H. Ballard, Po. 14214, general manager, Southern California Edison Company; S. M. Kennedy, Po. 17072, general agent, Southern California Edison Company, and A. H. Halloran, Po. 1291, Twelfth Vulcan, editor, Journal of Electricity.

Alan A. Morphy, Po. 10758, presided as toastmaster.

The principal speakers were First Tribune Harry N. Sessions, Po. 14256; Ira J. Francis, Po. 1628; G. B. McLean, Po. 10755; Benj. F. Pearson, Po. 12733, and Ernest Ingold.

One of the unique features connected with the Rejuvenation was the roll of honor compiled by First Tribune Harry N. Sessions, Po. 14256, on which were recorded the names of members who contributed effort towards making the affair a success. Tribune Sessions entitled it the "100 per Cent Roll of Honor." Awarding to each member a per cent according to the service he rendered in procuring candidates. B. F. Pearson, Po. 12733, leads the list with 25 per cent, with F. J. Airey, Po. 1266, second with 17, C. R. Listenwalter, Po. 18067, coupled with P. Gough, Po. 18056, third with 12. The remainder of the 100 per cent was distributed among the workers in various proportions.

Among others who rendered valuable service, according to reports was Clifton Peters, Po. 12734, secretary of the League.

Following is the Degree Team: E. L. Lewis, Po. 17074, Jupiter; Ralf Clapp, Po. 2000, Neptune; Z. H. Sherart, Po. 14258, Pluto; C. E. Cayot, Po. 16049, Vulcan; J. M. Morris, Po. 10759, Mercury; H. H. Fogwell, Po. 10732, Hercules; C. L. Spring, Po. 10777, Mars; W. C. McWhinney, Po. 18068, Apollo; F. B. Nightingale, Po. 7546,

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MILWAUKEE JOVIAN LEAGUE BOWLING TEAMS

Milwaukee Jovians are becoming very much interested in the bowling contest between the six Jovian League Teams, competing for honors and prizes in that city. The season schedule started September 21 and will end April 5. Following is the personnel of the reproduction: (1) Chas. A. Brewster, Po. 15982, (2) I. R. Douglass, Po. 18360, captain Neptunes, (3) R. Fishback, Po. 18361, captain Mercurys, (4) L. H. Marquardt, Po. 18365, (5) R. C. Wilke, Po. 17657, (6) L. Saevke, candidate, (7) R. E. Moody, Po. 15991, (8) J. W. Pfeifer, Po. 10981, (9) E. B. Heimbach, Po. 12830, (10) E. A. Lambrecht, Po. 11422, (11) H. H. Hutchison, Po. 19086, (12) A. C. Bocher, Po. 15434, (13) C. M. Axford, Greenbay, Wis., (14) Edw. Kummer, Po. 19089, (15) J. R. Morrisey, Po. 11192, (16) Charles M. Sullivan, Po. 18370, (17) G. E. Kirchgasser, Po. 15436, (18) E. H. Eckstein, Po. 15984, (19) B. Berssenbrugge, Po. 19036, (20) H. E. Brauns, Po. 16618, captain Mars, (21) E. L. Thoms, Po. 7373, (22) A. L. Taylor, candidate, (23) H. Trester, Po. 17656, (24) Ted Boggis, Po. 7345, captain Jupiters (25) LeRoy Day, Po. 18990, (26) B. A. Bovee, Po. 16617, captain, Plutos, (27) F. H. Ford, Po. 19084, (28) O. L. Funk, Po. 18992, (29) M. J. Schmitt, Po. 17018, (30) A. H. Sprecher, candidate, (31) Roy Amborn, candidate, (32) H. H. Tholen, Po. 19091, (33) A. L. Engel, Po. 18991, (34) Carl Golin, Po. 12385, treasurer of bowling league, (35) F. V. Ziekursch, Po. 16625, captain Vulcans, secretary of bowling league.

Avrenim, and J. G. Monahan, Po. 4736, E. B. Clay, Po. 12718, C. T. Carr, Po. 10722, G. F. Kirkpatrick, Po. 11089, F. G. Lasher, Po. 16065, and J. L. Addis, Po. 18047, Imps.

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Houston, Texas

AT THE Rejuvenation held at Westhiemer Hall, Houston, on the evening of December 9, First Tribune Harry M. Newning, Po. 16304, marshalled four candidates to be submitted to the glare of the great light of Jove's temple. After the candidates had been submitted to the X-ray tests, which failed to locate any short-circuiting bacteria in their mental, moral and intellectual make-up, members and candidates sat down to a banquet to celebrate the event.

A. C. Kater, Po. 13015, presided as toastmaster of the Joviation, enlivened by a number of addresses. Those who responded to the toastmaster's call were C. R. George, Po. 368, E. F. Hail, Po. 1924, Fifteenth Neptune, F. B. Hathaway, Po. 4980, A. J. Binz, Po. 1921, Thirteenth Neptune, and I. B. Jacobs, Po. 1927.

Among the prominent guests present were Charles A. Newning, Po. 2, Past Jupiter Four, C. R. George, Po. 368, city electrician, A. J. Binz, Po. 1921, Thirteenth Neptune, and E. F. Hail, Po. 1924, Fifteenth Neptune.

Members who, from reports at hand, were active in contributing to the success of the affair were J. N. Hardy, Po. 13014, E. E. Reed, Po. 10678, H. G. Winn, Po. 10695, and C. R. George, Po. 368.

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Des Moines, Iowa

SEVEN candidates were initiated into the mysteries of Jovianism at a Rejuvenation held at the Auditorium at Des Moines on the evening of December 9. All of the candidates are prominent in electrical circles of the city. Among them were H. Wesley, Garner, commercial manager, Des Moines Electric Company, and Wm. C. Robertson, superintendent of distribution of the same company.

At the Joviation held in connection with the affair Otto Starzinger, Po. 781, state representative from Polk County, delivered the principal address.

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N. W. Lovegrove, Po. 5638, was in charge of the Rejuvenation which was held in connection with the electrical celebration of "America's Electrical Week."

Following is the personnel of the Degree Team which conferred the initiation: L. A. Heitmeyer, Po. 1162, Jupiter; E. Lewis, Po. 10083, Neptune; J. H. Dougherty, Po. 10160, Pluto; V. L. Thomas, Po. 6569, Vulcan; N. W. Lovegrove, Po. 5638, Mercury; G. G. Fletcher, Po. 6053, Hercules; J. B. Dempster, Po. 8931, Mars; Geo. McAfee, Po. 10084, Apollo; Otto Starzinger, Po. 781, Avrenim, and Floyd Wallace, Po. 6573, Imp.

* * * *

Eau Claire, Wisconsin

EAU CLAIRE Jovians held a Rejuvenation at the Eau Claire Club on the evening of December 4, at which time and place First Tribune E. C. Dearth, Po. 17144, had assembled sixteen candidates who sought to explore the mysteries of the great Jovian domain. Members of the Order to the number of thirty were in attendance to aid in the initiatory ceremonies and to participate in the festivities of the Joviation which was held in connection with the affair.

The Joviation was enlivened by the music of an orchestra and enjoyable entertainment features given by local entertainers.

W. A. Parker, Po. 19374, presided as toastmaster of the occasion, and N. J. Whelan, Po. 18267, was the principal speaker.

The following Degree Team performed the ritualistic ceremony: A. R. Manley, Po. 18258, Jupiter; A. Smith, Po. 18265, Neptune; W. E. McGovern, Po. 18259, Pluto; N. J. Whelan, Po. 18267, Vulcan; G. A. Dickson, Po. 18248, Mercury; E. S. Welsch, Po. 18392, Hercules; E. C. Dearth, Po. 17144, Mars; J. J. Kelly, Po. 18255, Apollo; Gurth Williams, Po. 18268, Avrenim, and C. P. Ives, Po. 19359, A. Lofte, Po. 19365, and C. E. Barney, Po. 18242, Imps.

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Oklahoma City

ADDRESSES by the candidates was one of the enlivening features at the Rejuvenation and Joviation held by Jovians at Oklahoma City, December 7. The Rejuvenation was held at the Hall at 11 and 13 West Main street. There were five candidates to be initiated and twenty-one members were on hand to aid in the function.

After the Rejuvenation members and candidates repaired to the Hotel Skirvin, where arrangements for the banquet had been made.

H. E. Musson, Po. 7899, Statesman for Oklahoma, presided as chairman, introducing Statesman-at-Large Galen Crow, Po. 925V, who made the principal address. It was then that Chairman Musson introduced the candidates who responded with addresses.

The entertainment features were a Hawaiian orchestra and Hawaiian dancing.

From reports received, those who deserve special notice for their activities in making the affair a success were David S. Nims, Po. 3844, Statesman-at-Large Galen Crow, Po. 925V, and T. U. Nenon, Po. 2802.

Following is the personnel of the Degree Team: H. E. Musson, Po. 7899, Jupiter; T. U. Nenon, Po. 2802, Neptune; R. D. Sheldon, Po. 18856, Pluto; B. T. Bienford, Po. 6856, Vulcan; W. J. Baetje, Po. 6855, Mercury; A. J. Kean, Po. 10499, Hercules; J. M. Gayle, Po. 18845, Mars; David E. Nims, Po. 3844, Apollo, and J. G. Cronin, Po. 18840, Avrenim.

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Detroit

THE Rejuvenation held at the Hotel Cadillac on the evening of December 8, at Detroit, brought out eighty-four members to participate in the work of initiating the candidates and to enjoy the festivities. There were fourteen candidates, prominent among whom were W. S. Reynolds, manager electric department, Michigan Stove Company, and Edw. W. Bogg, Detroit representative, Auto Call Company.

After the affair those present paraded from the Hotel Cadillac to the Electrical Show at the Armory.

The following members composed the Degree Team that conferred the ceremony: J. T. Pearson, Po. 11211, Jupiter; H. E. Ford, Po. 12785, Neptune; H. O. Tieman, Po. 11505, Pluto; R. G. Van Gorder, Po. 2282, Vulcan; R. G. McLaughlin, Po. 14682; J. L. Turko, Po. 11506, Hercules; T. E. Lowe, Po. 11207, Mars, and J. F. Lamar, Po. 1856, Apollo.

* * * *

New York

TO J. R. POLLOCK, Po. 18675, Fifteenth Vulcan, goes the credit for the Rejuvenation held at New York, December 26. Although the event was not an occasion bringing together a large number of members, nor one which produced a long list of candidates, it was of importance because of the prominence of the one candidate Rejuvenated. J. J. Carty, chief engineer of the American Telegraph & Telephone Company, was the name and title of the member added to the roster of the Order.

Mr. Carty has attained a distinction that extends beyond the confines of the electrical industry, to which he has contributed a service whose value has received international recognition, and his affiliation with the Jovian Order adds another unit to the high standard of its membership.

For some time past Mr. Carty has expressed himself as being in full accord with the work the Order is doing to advance the interests of the electrical industry The demands of his work upon his time has prevented him from affiliating sooner.

* * * *

OBITUARY

B. F. KIRBY, Po. 2640, died at his home at Charlottsville, Va., December 16. At the time of his death he was employed as electrician for the University of Virginia. He was one of the old members of the Order in point of affiliation, having been initiated at the Rejuvenation held at Richmond, Va., January 14, 1910.

* * * *

HARRY P. HOUGH, Po. 11477, died at his home in Detroit November 25, of heart trouble. His death followed a general break down of his health. He was a member of the firm of Hanes-Hough Company, Detroit, and took an active part in work of the Order, as a member of the Detroit Degree Team. Jovian Hough was thirty-seven years old. He is survived by a wife and three children to whom The JOVIAN extends the sympathy and condolences of the fraternity.

* * * *

H. S. MCKAY, Po. 6002, died in Switzerland about December 10, from a wound received in the Battle of Ypres in June, 1915. Jovian McKay was a corporal and was taken prisoner by the Germans at the time he was wounded. Some months later he was pronounced unfit for further military service and exchanged with other wounded prisoners. He was then interned in Switzerland where he remained until his death. Prior to enlisting he was with the Canadian General Electric Company at Winnipeg, Man., where he has many friends.

* * * *

WARREN ORNE, Po. 10979, president of the White City Electric Company, and one of the leading electrical contractors of Chicago, died at the Augustana Hospital in that city January 7, after an operation for appendicitis. Jovian Orne was one of the pioneer electrical contractors of Chicago having been affilliated with his father who was one of the earliest contractors in the West. He was a member of the National, the Illinois and the Chicago Contractor's Associations, and served on important committees of each organization. He was 52 years old at the time of his death and is survived by two daughters, to whom The JOVIAN extends the sympathy and condolences of the fraternity.

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The Return Circuit

LIGHTS THAT DID NOT SHINE

By W. R. Joyes.

NOW IT came about in the life of Ampere Voltman, an illuminating expert of distinction, that a great illness befell him. In a vision that came to him in his state of somnolence, the conveniences of his modern home were, for some inexplicable reason, vividly impressed upon his mind. The soft placid glow of the modern illumination of his room was contrasted with the sputtering, flickering flame of an imaginary sperm oil lamp of antique design; a vision of the interior of a cave-man's pre-historic abode blended itself into the outline of the modern furnishings of his apartment, and beside each piece of bric-a-brac stood some vague conception of ancient Egyptian sculptural art.

Naturally, as the science of illumination had moulded his mind in its development to the subject of light, the contrast between the last word in modern lighting and the little gleam that penetrated the gloom but a few inches in the cave-man's dwelling, assumed the paramount feature of his vision. Between the invention of the one and the perfection of the other lay centuries of human existence. Out of the thought arose the question of the cause of human laggardness. Why had it taken all of those centuries to develop artificial light? Had the human mind been so incapable of invention in ages past, or was the human race lacking in the trait of industry? The literature of the ancient philosophers, the work of the pyramid builders refuted both ideas. Why then had it taken the human race thousands of years to effect this progress, that to his highly trained mind seemed so simple.

To Voltman the thing appeared unnatural. Why scarcely fifty years ago kerosene lamps, that were but little better than the old sperm-oil burner of his vision, were in common use!

"Would it not have been wonderful if I could have lived at an early age of the earth's history, with the knowledge of illumination I possess," he muttered.

As he gave utterance to the thought he became aware of an Egyptian mummy standing near his bed. Why he had not noticed it before seemed somewhat peculiar. It stood so near that he could easily have reached out and touched it. However, he felt that in some way the mummy had just moved to attract his attention.

This he found to be the case. Very deliberately as he lay with his gaze focused upon it the folds of cloth that enwound it slowly unfolded. As they slid down from its face and shoulders the effect produced was that of a bronze bust upon a robed pedestal. The unlided case that surrounded it grew dim and faded like a wreath of smoke.

Once free of its encumbrances, the mummy raised its arm in a sweeping gesture; its head bowed thrice and its lips parted mechanically.

"What you think strange, is very simple."

The words, although clear and distinct, seemed rather a vibration from the past than the articulation of a living being.

It paused at the completion of the sentence, then resumed in a vibrant monotone.

"Now that you are dead, there is no reason why your wish to investigate the cause that has prevented human progress may not be gratified. If you will arise in your astral form I will conduct you to the court of Amenophis."

Somewhat startled by the assertion that he was dead, Voltman attempted to move his limbs, but found them rigid.

"Then I am really dead? I did not realize it," he exclaimed in a voice that sounded unnatural.

"Few people do realize it—probably due to the lack of experience," returned the mummy. "But come; separate yourself from your material body. The time that I may spend with you is limited."

At the command Voltman sat up, and to his surprise his body remained prostrate. Without apparent effort he rose above it, and before he was aware of any movement he found himself outside of his apartment traveling rapidly through the air at the side of the mummy.

A thing that impressed him very much in connection with his movements was the fact that both himself and the mummy were moving backwards.

As though divining the question in his mind the mummy made a gesture.

"What we are passing through is not air, but time. One must seek the past by traveling backwards," it said.

"That sounds plausible, but where are we headed for?" inquired Voltman.

"To Ancient Egypt."

As the mummy finished speaking the astral Voltman felt himself descending.

A moment later he stood upon the earth. Before him arose the pillars of a large palace. Half-clad, copper-hued natives moved singly and in groups about him; the creaking sound of a cart drawn by humped-back cattle grated on his ears; a line of gilded war chariots passed, each followed by a band of helmeted warriors bearing long spears and polished metal shields.

After a moment's pause, the mummy drew Voltman towards the palace. Passing down a long colonnade they entered the council hall of Pharaoh and stood before his throne.

As they approaced, Voltman took note of his surroundings. The throne was upon an elevated dais at one end of the council chamber. Standing and seated about the dais was the retinue of Amenophis IV, for it proved to be the court of the Sun-Worshipper. There were two smaller thrones at each side of that upon which Amenophis sat. These were occupied by his two unmarried daughters. The elder Hatshepsut, known as the goddess of Harakht, a stern haughty woman, sat at his right; the younger El Amarna, for whom Pharaoh had named the new city in which his palace was located sat at his left.

The mummy, whom Voltman now noticed was restored to full life, bowed low before the throne. Voltman bowed also but his salutation was addressed more to the Princess El Amarna than to her father. Had he not been versed in ancient history he would have imagined that he stood before her renowned descendant, Cleopatra. Knowing as he did that Amenophis lived centuries before the queen of noted beauty, he searched his mind for some historical clew to the life of his daughter, but could recall none.

Apparently noting the look of admiration with which he regarded her, the princess extended her hand. Kneeling Voltman kissed it with a vigorousness that startled even himself.

While he was still kneeling before her, he became aware that Pharaoh was addressing him.

"So you want to light my palace with this wonderful magic, of which Aton is telling me?" the monarch inquired.

Voltman relinquished his hold of the princess' hand and assured Amenophis that such was his desire.

After a lengthy explanation concerning details of the proposed lighting system, in which the former mummy, now Aton, whom he knew to be a noted sculptor of the era, assisted him, Voltman was given the contract, or rather granted the privilege of lighting the palace.

As they started to withdraw the princess again extended her hand. This time he kissed it with such a resounding smack that the king regarded him with a stern look. The Princess Hatshepsut drew herself up haughtily and frowned. Apparently unperturbed by their disapproval, although blushing slightly, the young princess smiled down at him, and waved her hand as he turned to glance back from the exit of the hall.

Upon leaving the council chamber, Aton conducted Voltman to the rear of the palace. A few hundred feet behind it stood a large pyramid, apparently just completed.

"This should answer your requirements for a power house," the sculptor said.

"It is the very thing," Voltman assured him, after inspecting it.

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During the next few days, Voltman busied himself with plans for his work, through the details and difficulties of which it will not be necessary to follow him. It will be sufficient to say that the obstacles were numerous. He had nothing to start with but his resolution and his desire to succeed. This desire that was at first actuated by a craving for fame, was shortly augmented by another reason.

One evening, a few days after he started the work Voltmeter was busily engaged in drawing a plan on the tanned skin of a goat, when he was interrupted by the sound of approaching footsteps. Turning he beheld the Princess El Amarna standing beside him.

She smiled coyly and extended her hand. After the formal salutation she made no effort to withdraw it from his palm and he stood holding it as they talked.

"Do you know what your reward will be if you succeed in lighting the palace?" she asked.

"I do not," he replied.

She did not continue at once, but glanced down.

Finally she raised her eyes with a look of seriousness.

"It is a custom for the king to bestow the hand of his daughter upon those who achieve some great feat of arms or science. How would you like that?" she said.

"Fine!" responded Voltman.

To his surprise she jerked her hand from his grasp, and faced him with flashing eyes.

"So you would marry her, because she is a princess?" she exclaimed.

"Her!" retorted the astral Voltman, "I thought you alluded to yourself."

The look of anger faded from the princess' face, and she shook her head.

"It is my sister you will have to marry."

A vision of the haughty face of the Princess Hatshepsut that in some way seemed to identify itself with that of the Sphinx arose before Voltman's mind. To think of her in connection with love and marriage was about as reconcilable to his imagination as the idea of paying court to the stone image she resembled.

"But why may I not choose the princess I want?" he inquired.

El Amarna glanced about to make sure that no one was near.

"You cannot, because it is against the law, and if you refuse you will be beheaded," she whispered.

"That is certainly a grim law, but there should be some way to get around it," he said, thoughtfully.

The princess shook her head.

"There is only one way. If my sister should marry before the task is finished——

"I understand," he interrupted, "it is the old fairy-book story, but I will beat it. I'll finish the work and marry you in spite of the law."

"Oh!" she exclaimed, smiling up at him with a look of confidence.

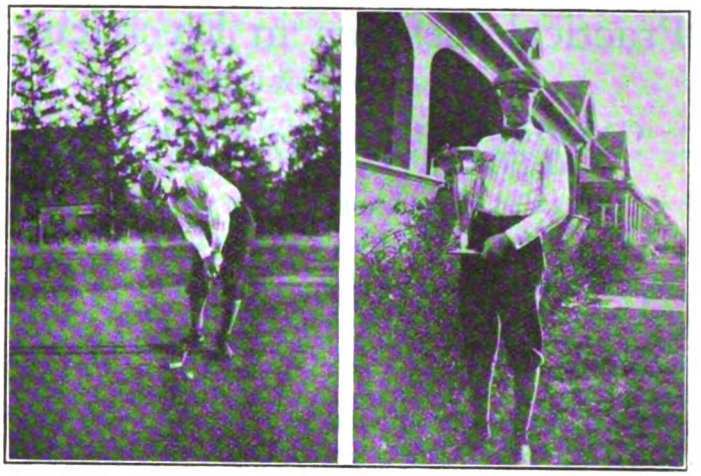
The next moment he caught her in his arms and kissed her, until she broke away and ran towards the palace.

Although Voltman's work progressed slowly, the fact did not annoy him. He met the Princess El Amarna frequently, and as the days slipped into months his love for the beautiful Egyptian girl grew and overshadowed his desire for fame. Her face was constantly before him as he worked. However, that fact urged him to greater effort rather than having the effect of retarding his progress.

The one shadow that came across his life was the remembrance of what El Amarna had told him of Hatshepsut and the ancient law.

He had met the Princess Hatshepsut a number of times since then. At first she had merely aroused in him a desire to avoid her. This he attributed to her homely appearance and her stern manner. As he had come to know her better, the knowledge gradually dawned upon him that in addition to being homely in appearance, she was a very shrewd and crafty woman. With this knowledge grew a fear to supplant the hope he entertained that she might be persuaded to concede her right to marry him to her sister.

This fear was augmented by the unusual interest she began to take in his work as it neared completion.



FRANK E. WATTS, Po. 1509-47. In order to eliminate any doubt that might arise about him winning a golf trophy (which incidently carries the championship of the National Freight Traffic Golf Association), Past Jupiter Watts had a photographer on hand to "cinch" the proof

One day as he was installing lights in the palace she came and stood beside him.

"Ampere, do you think you will have the lights ready for the Fete of Napri, the god of the harvest?" she asked.

It was the first time she had addressed him by his first name and both her manner and tone dispelled the last delusion he entertained. He felt that a tragic moment had arrived.

"I—I will have it finished within a few days," he replied, busying himself with his task.

"'Tis well," she said with an attempt at a smile that appeared an exhibit of craftiness rather than a portrayal of pleasure. Then lowering her tone slightly she continued.

"The reason I wanted to know was so that I could prepare for our wedding. The Fete of Napri is the greatest of the year and no more fitting time could be found for the occasion. Besides, there is a tradition that the daughter of a Pharaoh who marries at the Fete of Napri will be sure to succeed to the throne."

Although not unexpected, the conclusive manner in which Hatshepsut settled the affair astonished him for a moment. As he turned to protest, he caught sight of El Amarna standing beside a pillar of the hall. She placed her hand upon her lips, and merely bowing, to Hatshepsut, he remained silent.

After she departed El Amarna came to him.

"You see it is as I warned you," she said, in a tone of dejection.

"But there must be some way. I will consult Aton—"

The princess interrupted him with an attempt at a smile.

"It will be useless. The hand of Fate tore him—" she paused abruptly without finishing the sentence.

That night Voltman sought Aton.

The latter smiled grimly and shook his head when he heard the story.

"There is but one way that I know of: postpone the completion of the work until Hatshepsut is married," he said.

"But when will that be?" Voltman inquired.

Aton remained silent a moment.

"The revolt in Syria may produce a hero to claim her hand, but if, as you suspect, she has made up her mind to marry you, she has the right according to the law and may refuse him."

"Then this hero, whoever he might be, would have the right to claim El Amarna for his bride?"

Aton nodded assent.

"Nor could she refuse, being the youngest daughter."

During the next few days Voltman's thoughts were more upon the problem presented by his love affair than upon his work. If he finished the task successfully (and there was no doubt of its success in his mind), he would be compelled to marry Hatshepsut, a thought that became more repuslive to his mind each day. If on the other

(continued on page twenty-eight)

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Practical Lessons in Electricity

LESSON TWENTY-TWO

CARDINAL CHARACTERISTICS OF ALTERNATING CURRENTS

By TERRELL CROFT

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ALTERNATING Currents have been referred to briefly in preceding lessons. These should be reviewed before the reader proceeds. The difference between an alternating and a direct current was explained. It can be shown, using Fig. 1 for an illustration, that a direct current always flows in the same direction, while an alternating current alternates in direction. For example, a 60-cycle current alternates (Fig. 2) 120 times a second. It flows in one direction for 1-120 sec.; the next 1-120 sec. it flows in the opposite direction, and it continues to thus alternate as long as it flows. A 25-cycle current (Fig. 3) alternates 50 times a second.

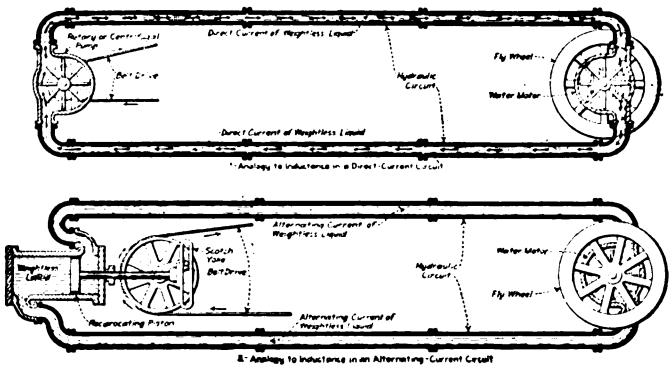

Fig. 1—Hydraulic Analogies to Direct and Alternating-Current Generators and Circuits

The difference between alternating-current and direct-current phenomona is very pronounced. The fact that a direct current always flows in the same direction while an alternating current constantly alternates in direction, as herein before described, is in itself a significant thing. But, as will be shown, due to the fact that an alternating current *does* constantly change in direction certain effects, which do not exist with steady currents, with alternating currents, become of great importance. These are the effects of *inductance* and *permittance* or as it is frequently called *electro-static capacity*.

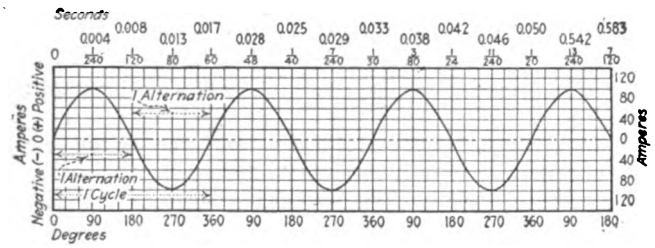

Fig. 2—Curve of a 60-Cycle Sine-Wave Form Alternating Current

Just how inductance and permittance in alternating current circuits produce these important conditions will be shown in following lessons. For the present note the following:—

(1)—*The current in an alternating-current circuit may not be equal to the e.m.f. impressed on the circuit divided by the resistance of the circuit.* That is, Ohm's law does not apply to alternating-current circuits in the way in which it applies to direct-current circuits. However, it will be shown that Ohm's law is also true for alternating-current circuits or any circuit but that it cannot always be applied directly.

(2)—*The sum of the voltage drops across the components of a current-carrying alternating-current circuit may not equal the e.m.f impressed on the circuit.* In a direct-current circuit the sum of the voltage drops does equal the impressed e.m.f.

(3)—*The sum of the currents in the branches of a divided alternating-current circuit may not be the same as the total current flowing into and out of the divided circuit.* With direct currents, the sum of the branch currents equals the main current, as stated in Kirchoff's law.

(4)—*Alternating current may flow in an "open" circuit.* Direct current cannot flow in an open circuit, except possibly for an instant after e.m.f. is applied to or removed from the circuit. The alternating currents that flow in so-called open circuits are displacement or charging currents due to permittance.

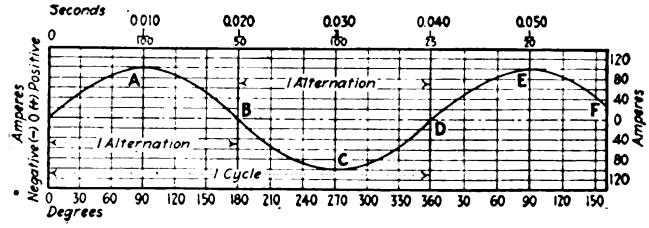

Fig. 3—Curve of a 25-Cycle Alternating Current

The method of generating alternating currents has been indicated in an elementary way in preceding lessons. Attention was directed to the fact that an alternating current is precisely like any other kind of an electric current in one respect, namely:—a voltage (e.m.f. or *difference of potential*) must be developed before an alternating current—or any sort of a current—can be forced to circulate in a circuit. To impel an alternating current in a circuit an alternating e.m.f. must be provided. Then, when this alternating e.m.f. is impressed on a circuit, an alternating current, inversely proportional to the opposition (impedence) offered by the circuit, will be impelled in the circuit. Alternating e.m.f.s are induced, in most cases, by moving conductors through flux. A machine whereby conductors are made to cut flux, in such a way that an alternating e.m.f. is impressed on the external circuit served by the machine, is an alternating-current generator or alternator.

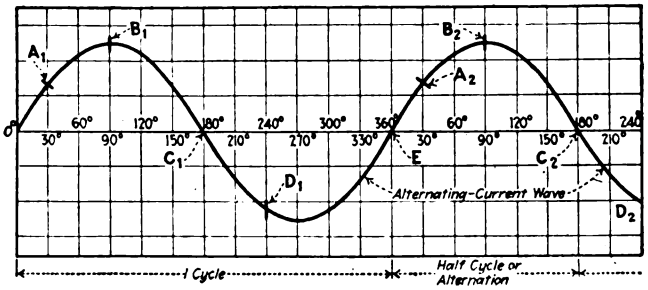

Fig. 4—Illustrating the Term "Phase"

It was explained in a former lesson that the e.m.f.s induced in the armatures of all commercial direct-current generators are alternating e.m.f.s and that a commutator is required to commutate these alternating e.m.f.s into direct e.m.f.s. Alternating e.m.f.s are induced in the secondaries of induction coils. Hence induction coils impel alternating currents in their secondary circuits.

A cycle is a complete set of values through which an alternating current or e.m.f. repeatedly passes, as shown in Figs. 2 and 3. A cycle comprises:—(*a*) an increase (*OA*, Fig. 3) in current or e.m.f. from zero to a maximum and a decrease (*AB*) from maximum to zero, *with the current or e.m.f. in one (for example, the positive) direction* and (*b*) *in the opposite (for example, the negative) direction*, an increase (*BC*) in current or e.m.f. from zero to a maximum and

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a final decrease (*CD*) to zero. In the illustration the portion *OABCD* represents one cycle.

EXAMPLE.—The expression "60-cycles-per-second" means that the current or e.m.f. referred to completes 60 cycles in 1 second, therefore 1/60 second is required to complete 1 cycle; see Fig. 2. See also following paragraphs on *Frequency*. With a "25-cycle current" 1/25 second is required to complete 1 cycle, as shown in Fig. 3.

The frequency of an alternating current or e.m.f. is the number of cycles that it completes in 1 second. Fig. 2 shows a graph of a 60-cycle alternating current and Fig. 3 shows a graph of a 25-cycle alternating current, both being plotted to the same time scale. Thus, it may be stated that the frequency of a current or e.m.f. is "60 cycles per second" or merely "60 cycles" or the frequency in another circuit may be 25 cycles.

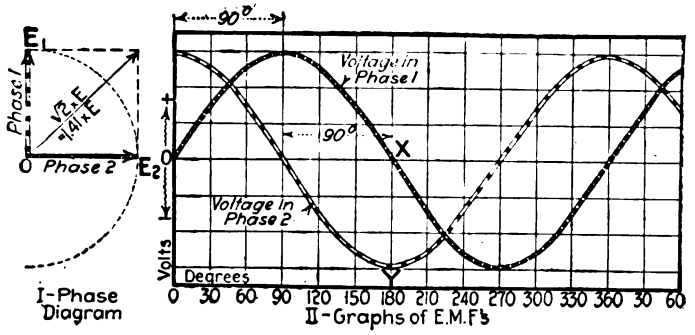

Fig. 5—Phase Diagram and Graphs for the e.m.f.s Produced by a Two-Phase Alternating-Current Generator

The frequencies used in practice are, in North America, 25 cycles (Fig. 3) and 60 cycles (Fig. 2). High frequencies such as 125 and 133 cycles were formerly employed.

NOTE.—A frequency of 60 cycles is common—almost standard—in the United States for general lighting and power installations. A frequency of 60 cycles is usually considered preferable for electric lighting because with lower frequencies, there may be a visible flickering of incandescent lamps. However, 25 cycles can be and is used for incandescent lighting. Some arc lamps do not operate well on 25 cycles. For long-distance power transmission a low frequency—for example, 25 cycles—is sometimes considered preferable to a higher one because the undesirable effects of inductance and permittance (electro-static capacity) increase as the frequency increases. However, it is now usually conceded, that, all things considered, 60 cycles is, ordinarily, preferable to 25, even for power transmission, where the energy at the receiving end of the circuit is to be used for general power and lighting service. A few of the older central stations still generate at either 125 or 133 cycles, which were formerly in vogue. For single-phase railway work, 15 cycles has been used to a limited extent. See the author's *American Electricians' Handbook* for further information regarding the adaptability of different frequencies for different services.

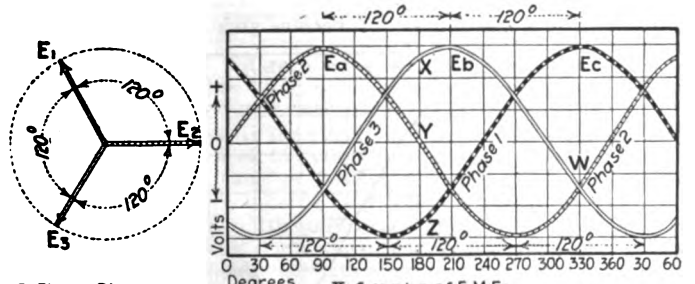

Fig. 6—Phase Diagram and Graph for the e.m.f.s Produced by a Three-Phase Alternating-Current Generator

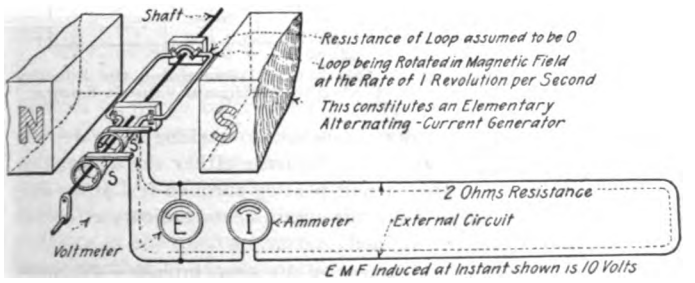

Fig. 7—Elementary Alternating-Current Generator Forcing Current Through an External Circuit. (The Sine Curves of e.m.f. and Current for this Arrangement are Shown in Fig. 8)

An alternation is half a cycle, as shown in Figs. 2 and 3. There are two alternations in a cycle, one in the positive and the other in the negative direction.

Phase. Any point on an alternating-current wave is called a phase. To designate a certain phase of a wave it must be specifically indicated in some way. Usually this is done by specifying the number of electrical degrees between the phase to be indicated and some reference point or phase on the wave. The reference point is, unless otherwise specified, taken as the 0 deg. point or phase—the starting point of the wave.

EXAMPLE.—In Fig. 4 (taking 0 deg. as the reference point or phase) A_1 and A_2 are 30 deg. phases, B_1 and B_2 are 90 deg. phases, C_1 is a 180 deg. phase, D_1 and D_2 are 240 deg. phases, E is a 360 deg. phase, etc.

It has been explained that electrical degrees really refer to time. Hence, it follows that the term phase may also refer to time. Therefore, a phase may also be defined as the *time instant* when some maximum, zero or any other value is attained by the wave.

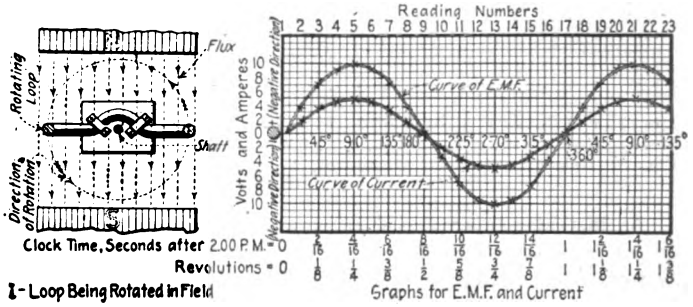
Reading Numbers
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Flux
Rotating Loop
Shaft
Direction of Rotation
Volts and Amperes
Curve of E.M.F.
Curve of Current
Negative Direction
45° 90° 135° 180° 225° 270° 315° 360° 45° 90° 135°
Clock Time, Seconds after 2.00 P.M. = 0
Revolutions = 0
1-Loop Being Rotated in Field
Graphs for E.M.F. and Current

Fig. 8—Loop Being Rotated in a Magnetic Field and Graphs of e.m.f. and Current Induced Thereby

EXAMPLE.—When two alternating currents attain their corresponding zero, maximum and intermediate (not necessarily the same) values at exactly the same instants, they are said to be in phase. If the currents are not in phase they reach corresponding values at different instants.

Difference in phase is obviously the difference, usually stated in degrees, between two specified phases.

EXAMPLE.—The difference in phase between points *A* and *B* in Fig. 4 is:—90 — 30 = 60 *deg.* The difference in phase between points *B* and *E* is:—360 — 90 = 270 *deg.*

NOTE.—The above given definitions for "phase" are the technically correct ones. However, the word "phase," as loosely used, has other meanings. Sometimes, each of the three wires of a three-phase circuit is called a "phase wire"—or for short, "a phase." Also, any pair of wires of a polyphase (to be defined later) circuit, across which the normal voltage of the circuit should exist, is sometimes referred to as a *phase* of the circuit. Two-phase and three-phase currents and circuits will be treated in following lessons.

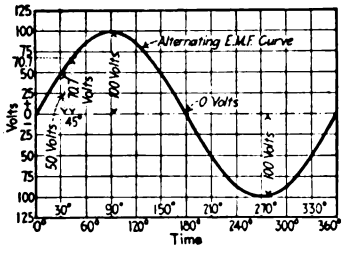

Fig. 9—Illustrating Instantaneous Values of e.m.f.

Alternating e.m.fs. and currents may be either single-phase or polyphase, depending on the construction and arrangement of the generator used for their production. Single-phase e.m.f.s, currents and principles will be discussed and later polyphase circuits and devices will be treated.

The term "single-phase" implies a single, or only one alternating e.m.f.—or current—in a circuit. That is, with a single-phase e.m.f. or current there is, at any given instant, only one

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"phase," as above defined. With polyphase e.m.f.s or currents there is more than one "phase" at any given instant.

EXAMPLE.—In the graph of a single-phase alternating current, shown in Fig. 4, there is at the 90-degree instant but one "phase," B_1. In the two-phase curve of Fig. 5 there are two "phases" at the 90-degree instant. In the three-phase curve of Fig. 6 there are three phases at the 90-degree instant. There are two "phases," at every instant, in a two-phase e.m.f. or current curve and three "phases" at every instant in a three-phase curve.

As will be shown later, under polyphase e.m.f.s and currents there may be two or more alternating e.m.f.s impressed on, or two or more alternating currents in, the same polyphase circuit. A single-phase circuit ordinarily requires but two wires and is, in this respect, similar to a two-wire direct-current circuit. A polyphase circuit always has more than two wires.

EXAMPLE.—The alternating e.m.f. induced in the loop of Fig. 7 when it is rotated in the magnetic field is a single-phase e.m.f. and the current this e.m.f. impels in the external circuit is a single-phase current. Hence, graphs like those of Figs. 8 and 9 represent graphically single-phase e.m.f.s and currents. A single-phase generator is one which impresses a single alternating e.m.f. on its external circuit. A single-phase circuit is one which has impressed on it, by its source of e.m.f., a single alternating e.m.f. Any alternating e.m.f. impressed on a two-wire circuit must be a single-phase e.m.f. and any alternating current in a two-wire circuit must be a single-phase alternating current.

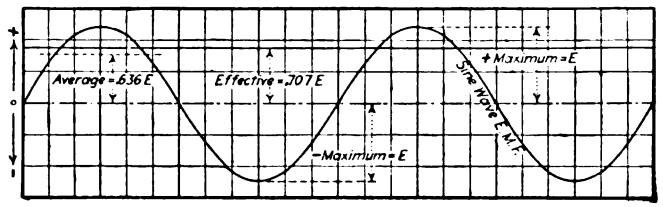

Fig. 10—Relations Between Maximum, Average and Effective Values of Alternating Currents and Voltages

An instantaneous value of an alternating current or voltage is its value at some designated instant (phase) or, in other words, at some designated point in its cycle.

EXAMPLE.—In Fig. 9 the instantaneous e.m.f. at the 30 deg. phase is +50 volts. (See Figs. 2 and 3, which indicate the actual time elapsing between different phases for 60 and 25-cycle e.m.f.s.) At the 45 deg. phase the instantaneous e.m.f. is +70.7 volts. At the 1/4 cycle or 90 deg. phase the instantaneous e.m.f. is +100.0 volts, which is also the maximum or crest e.m.f. in this case. At the 180 deg. phase the instantaneous e.m.f. is 0 volts. At the 270 deg. phase the instantaneous e.m.f. is —100.0 volts, etc. The symbol + means that the e.m.f. value following it is in the positive direction. The symbol — means that the e.m.f. is in the negative direction.

The maximum value of an alternating e.m.f. or current (sometimes called the *crest* value) is the greatest value that it attains, Fig. 10. It is an instantaneous value. For example, the maximum value of the alternating current of the curve of Fig. 11—*I* is 1 amp. With a sine-wave form, a maximum positive-direction current flows for only an instant during one alternation of a cycle and a maximum, negative-direction current flows for an instant during the other alternation of the cycle.

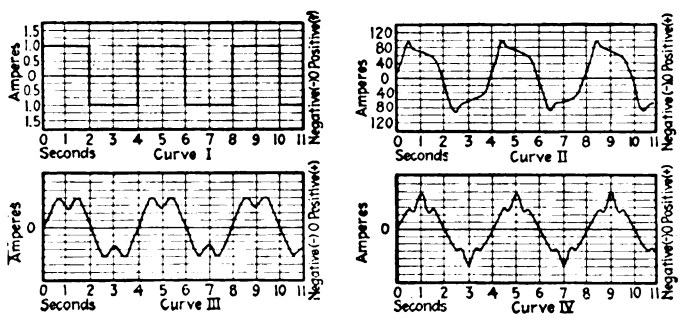

Fig. 11—Curves of Alternating Currents

NOTE.—The insulation of alternating-current apparatus must be designed to successfully withstand the maximum e.m.f. of the circuit. In spite of the fact that this maximum is (where the e.m.f. has a sine-wave form) impressed for only an instant during each alternation, the insulation may be broken down during these "maximum" instants if it is not of sufficient strength.

The average value of an alternating current or e.m.f. (Fig. 10) is the average of all of the instantaneous values—of current or e.m.f. as the case may be—of a cycle. The fact that half of the instantaneous values are positive and half negative is disregarded in computing the average value. Through the application of the higher mathematics it can be shown that:—*The average value of an alternating e.m.f. or current of sine-wave form = 0.636 × its maximum value.* It follows that:—*Maximum value = average value ÷ 0.636 = 1.57 × average value.* These relations are given in the formulas in a following paragraph.

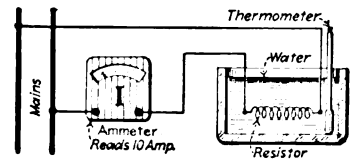

Fig. 12—Illustrating the Heating Effect of Direct and Alternating Currents

NOTE.—Average values are seldom used or referred to except in theoretical demonstrations. A practical man may never hear of average values in his every day work.

The effective or virtual value of an alternating current is defined as that value (Fig. 10) which will produce the same heating effect as will the same intensity of direct current. An alternating current is continually changing in intensity, within a certain range from instant to instant. And it changes in direction at each alternation. These changes occur even if the load is constant.

Now these changes occur many times a second with the alternating currents which are used in practice. For example, with a 60-cycle current (Fig. 2) there are 120 alternations per second. Commercial ammeters could not be made which would indicate at every instant these constantly-changing values—even if it were desirable to have them do so. The mechanisms of the instruments could not respond to these ever-changing variations.

When an alternating current flows in an instrument designed for measuring alternating current intensities the pointer of the instrument will be deflected along its scale a certain distance and will remain steady at that location so long as the current remains constant, that is, so long as the maximum value of the current does not change during successive alternations. But, if the alternating-current intensity decreases—if its maximum value decreases through successive alternations — the pointer will swing back, showing a smaller deflection. If the alternating current increases, the deflection of the pointer will become greater than before.

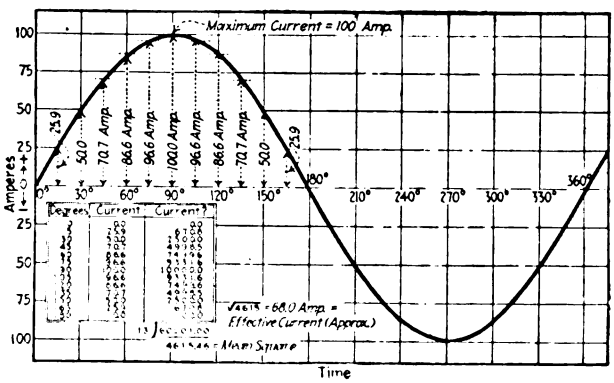

Fig. 13—Illustrating Approximate Method of Determining the Effective Value of an Alternating Current when its Maximum Value is Known

It is evident therefore that by properly marking its scale, the ammeter could be "calibrated" to indicate either the average or the maximum value of the current passing through it. However, it is more convenient to have the instruments indicate effective values, as they are above defined.

EXAMPLE.—If a direct current of 10 amp. intensity (as indicated by the ammeter, Fig. 12) flowed, for say 1 hour, through the insulated resistor submerged in the water in the vessel, the heat, due to the $I^2 \times R$ loss in the resistor, would raise the tem-

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perature of the water in the vessel. Assume that this direct-current heating effect raised the temperature 10 deg.—from 70 deg. to 80 deg. Fahr. Now assume that instead of direct current, an alternating current is forced through this same resistor submerged in this same vessel. Further, assume that the intensity of this alternating current is regulated by varying the applied e.m.f., until a constant alternating current flows through the resistor which will, in exactly 1 hour, raise the temperature of the water from 70 deg. to 80 deg. Fahr.—the same temperature rise as before. Then this alternating current would have an *effective* value of 10 amp.—because it has the same heating effect as a 10-amp. direct current. In other words, it would be an alternating current of 10 amp.

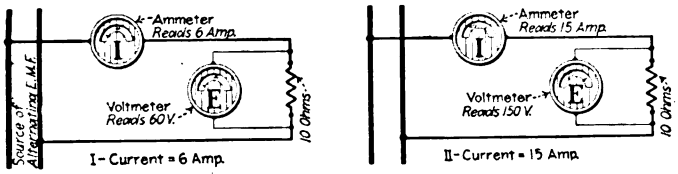

Fig. 14—Effective e.m.f. Impelling Effective Current.

NOTE.—The *ampere* was used as the unit of direct current intensity before alternating currents were employed. When then it became necessary to measure alternating current intensities, instead of defining some new unit for measuring these intensities, it was decided to also call the unit of alternating current an ampere and to have it, insofar as possible, equivalent to the direct-current ampere.

Now alternating current intensities cannot be compared with direct current intensities on the basis of their electrolytic effects. Why? Because the metal deposited electrolytically by an alternating current during any one alternation would be redeposited in the other direction, during the next alternation. Obviously, the net electrolytic effect of an alternating current is nil. Hence, an alternating-current intensity or rate of flow can *not* be defined by its electrolytic effect as is the direct-current intensity. But the heating effects of alternating and direct currents can be compared readily—as shown in the above example. Hence, it was decided to define the alternating-current ampere on a basis of its heating effect as herein before specified.

Alternating-current measuring instruments indicate effective values. This is true of both ammeters and voltmeters. When speaking of alternating currents or e.m.f.s., the values referred to are, ordinarily, unless it is otherwise specified, effective values. The practical man deals almost exclusively with effective values.

The relation of the effective to the maximum value of an alternating current or voltage is shown in Fig. 10. It may be expressed thus:—*Effective value = 0.707 × maximum value.* It also follows that:—*Maximum value = effective value ÷ 0.707.* Equations expressing these relations are given in a following paragraph.

EXAMPLE.—What is the effective value of the alternating current of Fig. 2? SOLUTION.—Its maximum value, reading from the graph, is 100 amp. Hence, to find its effective value:—*Effective value = 0.707 × maximum value = 0.707 × 100 amp. = 70.7 amp.*

EXAMPLE.—What is the effective voltage of a circuit that has a maximum voltage of 156 volts? SOLUTION.—Substitute in the formula:—*Effective value = 0.707 × maximum value = 0.707 × 156 = 110 volts.*

EXAMPLE.—If a voltmeter on an alternating-current circuit reads 2200, what is the maximum instantaneous voltage? SOLUTION.—Voltmeters and ammeters always indicate effective values. Substitute in the formula:—

$$\text{Maximum value} = \frac{\text{Effective value}}{0.707} = \frac{2200}{0.707} = 3110 \text{ volts.}$$

Why the effective value equals 0.707 × the maximum value may be explained thus:—The effective value of an alternating current is, herein before stated, determined by its heating effect. Now the heating effect of a current of electricity is proportional to the square of the current, in amperes. It follows that the heating effect of an alternating current *at any instant* is proportional to the square of the current at that instant. Now if the squares of the current intensities of an alternating current for a great number of equidistant instants over an alternation be computed and their average taken, this resulting value will be the average or mean square of all of these instantaneous currents. Then to ascertain the equivalent steady current that would produce the same heating effect as all of the instantaneous currents of different values, the square root of the mean square is taken. It will always be found, if the problem is solved by the approximate method just described, that this *square root of the mean square* for currents of sine-wave form is about equal to 0.707 of the maximum value. It can be readily shown, by the application of the exact methods of the higher mathematics, that the value 0.707 is absolutely correct for currents of sine-wave form.

EXAMPLE.—Consider the alternating-current sine curve of Fig. 13. The maximum current is 100 amp. The mean square of the current values at 13 different equidistant instants is 4615. The square root of 4615 is 68.0 amp. which is the effective current in accordance with this *approximate* solution. Actually the effective current, with a maximum of 100 amp. would be:—70.7 amp. Hence, the above approximate solution gives a value about 3 per cent low. If current values are taken 2 deg. apart over an alternation, instead of 15 deg. apart as in the example just solved, the effective value will come out almost exactly 70.7 amp. Obviously, it is not necessary to consider values over an entire cycle, as the values for one alternation are the same as those for another, assuming that the maximum current remains the same.

The effective value of an alternating e.m.f. is that value which will propagate an alternating current of corresponding intensity.

EXAMPLE.—If in a circuit (Fig. 14—*I*), comprising resistance only and having a resistance of 10 ohms, an effective alternating current of 6 amp. flows, the effective e.m.f. impelling the current is (Ohm's law):—$E = I \times R = 6 \times 10 = 60$ *volts.* If an effective current of 15 amp. flows in this same circuit (Fig. 14—*II*) then the effective e.m.f. impelling it must be:—*15 × 10 = 150 volts.*

The relation of the effective value of an alternating e.m.f. to its maximum e.m.f. is numerically the same as the relation of effective and maximum current values. It is always the e.m.f. which originates or impels a current and a current is always proportional to its e.m.f. If an alternating current has a sine-wave form, the e.m.f. which impels it must, obviously, have a sine-wave form. Hence, the same numerical relation must hold between maximum and effective values for both voltages and current. Hence:—*Effective e.m.f. = 0.707 × maximum e.m.f.* It follows that *maximum e.m.f. = effective e.m.f. ÷ 0.707 = 1.46 × effective e.m.f.*

The numerical relations of maximum, effective and average values to one another are shown in the following equations. They have been thus collected for ready reference:—

(1) *Maximum value = *1.41 × effective value.*
(2) That is:—*Em = *1.41 × Ee* or *Im = *1.41 × Ie.*
(3) *Maximum value = 1.57 × average value.*
(4) That is:—*Em = 1.57 × Ea* or *Im = 1.57 × Ia.*
(5) *Effective value = 0.707 × maximum value.*
(6) That is:—*Ee = 0.707 × Em* or *Ie = 0.707 × Im.*
(7) *Effective value = 1.11 × average value.*
(8) That is:—*Ee = 1.11 × Ea* or *Ie = 1.11 × Ia.*
(9) *Average value = 0.636 × maximum value.*
(10) That is:—*Ea = 0.636 × Em* or *Ia = 0.636 × Im.*
(11) *Average value = 0.90 × effective value.*
(12) That is:—*Ea = 0.90 × Ee* or *Ia = 0.90 × Ie.*

*The value 1.41 is an approximate expression of the exact value $\sqrt{2}$. A more accurate expression of this value is:—1.414228.

* * * *

TWO ELECTRICAL ACHIEVEMENTS

TWO OF the most practical achievements in electrical development during the past year were the wireless telephone and the transformation of cable flashes into sound. When it is considered the possible bearing these features may have upon the transmission of communication, the possibilities they present for facilitating commercial activities and the basis they offer for extending direct communication to every part of the earth, their value can readily be conceived.

Although neither has been perfected to a stage where it may be put into general use, both achievements have been advanced to an encouraging stage. The task of adapting them to practical use remains to be worked out.

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Lights That Did Not Shine

(continued from page twenty-three)

hand he delayed until the return of the Egyptian army from Syria, he felt he would be just as sure to lose El Amarna.

Already reports of the victories of Harmahib, the general commanding Pharaoh's forces had reached his ears. That he would press his claim for the hand of the princess, Voltman felt certain.

He was still no nearer a solution of the problem on the day preceding the Fete of Napri. The work was completed. The plant had been given a trial and worked satisfactorily. The lights were all installed. He had tried the switches and everything worked perfectly.

That night he sat late trying to devise some plan by which he could reject the hand of Hatshepsut and claim that of El Amarna. Two courses presented themselves to his mind. The idea of flight he rejected because there was no place to which to flee. The other was to first demonstrate the illumination to Amenophis, boldly demand his youngest daughter in defiance of the law, and threaten to destroy the lighting plant in case he was refused. The latter plan appeared the only feasible one and he resolved to adopt it.

When he told El Amarna and Aton of his intention the following morning they shook their heads with an air of misgiving.

"You do not know Hatshepsut, nor her influence over the king and the people. Once you offend her nothing can save you," Aton told him.

However, the warning did not shake Voltman's resolution. Although he had labored at great disadvantage, he had succeeded—even beyond his own expectation. He knew that the palace would be a blaze of light when he turned on the switches that evening. He felt that the illumination would astound Pharaoh and his subjects. This would give him a prestige, or rather endow him with superhuman powers in their minds. He believed that Amenophis would yield rather than lose the lighting system, and that the people over whom Hatshepsut wielded a power as the goddess of Harakht, the God of Light would be too fearful of his power of magic to take sides with her against him.

During the day the natives began to arrive in great numbers for the fete, and to behold the wonderful, magic lights the report of which had gone abroad over the empire. News also reached Voltman of General Harmahib's victorious return to the city.

Late in the afternoon, as Voltman stood watching the crowds about the palace, El Amarna came to him excitedly.

"I have learned a secret," she said, hurriedly. "Hatshepsut knows of your intention to demand my hand of the king and is in a great rage. She has sent for her priests and they have formed some plan to defeat your purpose."

"What will they attempt to do?" he asked.

Before she could reply, Aton joined them.

"She will use her influence to embroil the people against you," he said. "Your only hope lies in flight. I will arrange to have a chariot ready and we can start as soon as it is dark."

"That may be necessary, but I prefer to wait until Pharaoh has refused my request. I may gain his permission to marry El Amarna in spite of Hatshepsut's fanatical influence." Voltman replied.

Aton shook his head.

"You will not succeed, but if you will not be convinced until you try, I will make the arrangements and wait."

That evening when darkness came Voltman switched on the lights. There was no failure. Inside and out the palace glowed radiantly in the dense gloom of the Egyptian night, and a murmur of astonishment arose from the assembled populance.

Pharaoh was so elated that he spent an hour inspecting the illumination from all sides. He kept Voltman at his side, and gave utterance to so much praise of the lights, and so many compliments for his achievement, that Voltman began to grow confident.

Finally, they returned to the council chamber and the king mounted his throne, inviting Voltman to a seat beside him. Hatshepsut and El Amarna were seated in the accustomed places. Voltman also noted that General Harmahib was present. However, the illumination had so completely captivated Pharaoh's imagination that he gave but little attention to his victorious officer.

After a short ceremony, Amenophis arose to address the assembly.

"It has been a custom of times past," he began, "for the Pharaoh's of Egypt to bestow their daughters in wedlock upon those of their subjects who perform some remarkable achievement of arms or science. You behold the work of magic in the wonderful lighting of our palace. Is it not befitting that so great a genuis as he who has produced it should be rewarded with the hand of our royal daughter?"

Those assembled bowed thrice with sweeping gestures of their arms.

"O Most Glorious Pharaoh, it is true! He has well deserved the great honor!" came the reply, at the conclusion of the last bow, that rumbled in an echo among the pillars of the council hall.

"Arise my son," commanded Amenophis, "henceforth you will be a member of the immortal household of Egypt's Pharaohs."

A shout of approval greeted Voltman as he arose to his feet. In some way, however, it did not diminish the feeling of misgiving he felt. He knew the time had come to speak. Intuitively he could feel the piercing gaze of Hatshepsut fixed upon him. With an effort to compose himself he gave one glance towards El Amarna, then stepped boldly to the edge of the dais.

Raising his hands in the customary salute, he began:

"Great Pharaoh, ladies and gentlemen. I feel very deeply this great honor you have bestowed upon me." There was a huskiness in his voice that detracted from his confidence and in order to gain time and gather strength to his tone he began an eulogy on the work of building the pyramids. When his voice became clear he plunged desperately into the question pertaining to the choice of the two princesses and got through with it as hurriedly as possible.

As he finished, a death-like silence prevailed that was anything but reassuring. The thousand copper-hued natives crowded into the hall could not have been more quiet had they been enclosed in the mummy cases that were eventually to hold them.

However, the attitude of Amenophis gave him courage. Moving to his side the king laid his hand upon his shoulder.

"It gives me great pleasure to grant the request of Prince Ampere," he said, addressing his subjects. Although this would have been impossible according to the fixed law of Egypt, I have but two daughters who are unmarried. One of them, Hatshepsut, will be bestowed upon my worthy general, Harmahib, and the other El Amarna—

Before he could finish Hatshepsut stood beside him. She had snatched the band from her forehead, allowing her hair to hang in unbraided strands about her face and shoulders. Her face twitched with emotion, and her eyes blazed with the angry light of jealousy and hatred.

"What is this!" she cried. "Do you mean that I, Hatshepsut, the acknowledged goddess of Harakht, who rules the destinies of Egypt am to be spurned and cast aside by a mere light maker? One who has stolen a few stray beams of light from the glorious Horus? Fools! Fools! It cannot be!"

She paused with an angry shake of her head that caused more of her hair to fall before her face. Then suddenly pointing upwards toward the cluster of lights in the central dome overhead she gave a shrill scream.

"Look! what will the sun-god say when he finds you have stolen his power? Are you such dupes to think he will not be angry; that he will not punish you with drought and famine? Do you think he will continue to give victories to our armies and abundant harvests to our husbandmen when he finds we are stealing his brightness while he is at slumber?"

At her first words, the crowd shrank back, but as she continued her fanatical harangue they began to draw nearer to the dais upon which she stood as though awestricken by her words.

(continued on page thirty-one)

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EDDY, H. W., Po. 11105, First Tribune, care Riegos y Fuerza del Ebro S. A. Apartado 491 . . . . . Barcelona

(*These First and Second Tribunes appointed by Reigning Jupiter. All Statesmen-at-Large and Stateemen in this list were appointed or elected to serve during this administration.)

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Lights That Did Not Shine

(continued from page twenty-eight)

Voltman who had been watching Amenophis closely saw the old king give a start at her first words. A look of fear came into his face and tremblingly he moved back and sank upon the throne. At the same time he felt a tug at his sleeve and found El Amarna standing beside him.

"Come, they will be like wild beasts in a few minutes," she said, nodding towards the faces upturned towards Hatshepsut.

Hurriedly and apparently unnoticed, they descended from the dais at its rear, and rushed out of the hall.

Aton was waiting for them at the rear of the palace.

"Hurry, there is no time to loose," he urged.

As he spoke, the figure of a man rushed past them and disappeared into the darkness.

Raising his arm quickly, Aton flung his short spear after him. There was a clanging sound as it fell to the stone floor of the balustrade, and the sculptor dashed after the speeding form.

"It was one of Hatshepsut's imps!" cried El Amarna.

They hurried after Aton, following as near as they could determine in the direction he had taken. Several hundred yards back of the palace stood a clump of palms. As they hurried on the sound of clattering hoofs and the creak of chariot wheels came to them from just beyond it.

A few minutes later they met Aton returning.

"We have been betrayed," he said, dejectedly. "My chariot driver has been bribed, or frightened into deserting us."

El Amarna laid her hand on his arm.

"We will have to hide—perhaps Hatshepsut does not know of the secret chamber in the pyramid," she suggested.

"It is our only chance," replied Aton.

As they moved towards the towering structure, the doors of the palace were suddenly thrown open and a horde of clamoring beings rushed out.

Hatshepsut was among them, still screeching her harangue.

"Smash them! Tear them down! Do not leave one for the sun-god to see!" she shouted.

A moment later, the crashing blows of clubs, spears and stones, and the ringing sound of broken glass told that they were demolishing the lights of the palace.

"Now is our chance," said Aton.

They crept into the pyramid and up the incline that wound towards its dome.

High above the ground they came to a little opening in its stone side. Entering, Voltman found himself in a room that extended across the entire side of the pyramid. The door was a large stone which Aton closed behind them.

Next the sculptor crossed the room to a small opening at its side.

"Look, the palace is in darkness," he said, drawing back after peering out.

Voltman looked down. There was not a light visible. His labor of months was destroyed and with it his hope for undying fame and his ambition to achieve a great goal that had appeared to him so simple.

At a cry from El Amarna he turned quickly to find both she and Aton struggling in the hands of a squad of Pharaoh's soldiers. Evidently, they had been hidden in the room, awaiting them.

His impulse to spring forward to their aid was suddenly checked by a realization that they were not live soldiers. They were mummies. Furthermore, they were increasing in numbers rapidly. One strangely resembled Amenophis and another, the prototype of the haughty Hatshepsut glared at him scornfully.

He turned quickly towards El Amarna. Although the outline of a mummy case was slowly closing about her; he saw or imagined he saw a smile on her lips.

A moment later and her face was completely hidden.

In despair he turned to Aton.

(continued on page thirty-two)

Use a fuse which will really protect those small motors — you can if you install the 1/10 to 1/4 horse power sizes of

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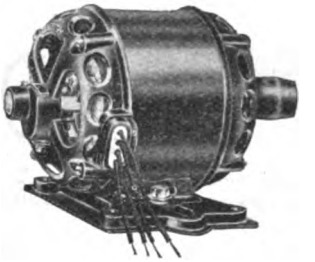

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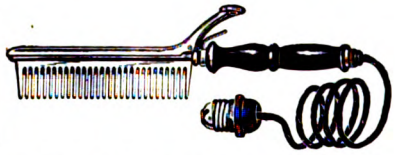

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PELOUZE MANUFACTURING CO.
232-242 E. Ohio Street CHICAGO

Lights That Did Not Shine

(continued from page thirty-one)

A fold of cloth was slowly winding itself about the sculptor's limbs, but he, too, smiled.

"What you have experienced was my own life adapted to fit your profession," he said, slowly. "When I tell you it was I who demanded the hand of El Amarna and was put to death, you will understand. But before I return to my case I would like to know if you have profited by your experience. Have you learned why the human race advanced so slowly in science?"

Astounded at the sculptor's revelation, Voltman gave one despariing look at the now completely shrouded figure of El Amarna.

"I—I think it was love," he stammered.

Aton shook his head.

"SUPERSTITION."

The word came from beneath the folds of cloth that had closed over his face.

Completely mystified Voltman closed his eyes.

When he opened them again the first thing that met his gaze was a sight of his own body. Evidently his astral being was back in his apartment.

Glancing towards the reading table at the side of his bed he saw the ash tray with its design, a replica of the Sphinx between two pyramids, and the volume of Egyptian History were exactly as he had left them.

A fly buzzed down and lit upon his nose. His sense of feeling responded to the vibration from its Terpsichorean activities. He slapped at it, missed it, then sat up abruptly.

"Why, I'm not dead—well, what do you think of that!" he ejaculated.

Coming Rejuvenations

February—Elizabeth, N. J. First Tribune, W. E. Fey, Po. 10120, care Diehl Manufacturing Co.

February 15—Harrisburgh, Pa. First Tribune, L. L. Ferree, Po. 18865, 1830 Regina St.

February—Sacramento, Cal. First Tribune, A. E. Brockway, Po. 6039, care Latourrette Fiscal Co., 3431 Sacramento Ave.

March 17—Louisville Ky. First Tribune, Robert Montgomery, Po. 6147, care Louisville Gas & Electric Co.

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HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their **current membership cards** at the time of settlement. **Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage.** Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

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THE JOVIAN

Volume Eleven MARCH, 1917 Number Four

A STORY OF MIGHTY DEEDS ELECTRICAL

IN WHICH A MORAL IS TAUGHT

By H. S. Cooper, Po. 365

Presented Before the Dallas Electric Club and Jovian League

JUST A short twenty-five years ago, an every day business man got out of bed, shiveringly, on a dark, cold morning, lit a gas jet or a smelly kerosene lamp, hustled into his slippers and a dressing-gown, lit a wood or a coal fire in grate and stove, put on the kettle for coffee, shaving water and a hands-and-face bath, climbed into his cold clothes and waited three-quarters of an hour while the fire "burned up" and breakfast was prepared. If he wished to go into basement, closet or dark out-building he carried a fluttering candle, a flaring, smoking kerosene lamp or a dim lantern. A few minutes delay of return meant a cooling breakfast.

Then he walked four or five blocks to a jolting horse-car, with straw or hay on the floor as the "heating apparatus," which carried him along, in semi-darkness and full discomfort, at the rate of seven miles an hour—at most. If his office was above the ground-floor he tramped up to it flight by flight of tiresome stairs. If it was still dark or murky he lit a flickering, open-flame gas jet and sat up close to the wood or coal grate while he read his mail. If he wished to communicate with any other person in the city he either walked out to see them, or sent a message by that invention and protege of the deviltry—the "errand boy."

All day long in business, and again when he went home after business, that man was absolutely dependent on the direct manual or pedal service of either a two-legged or a four-legged animal.

For comfort in his office on a cold day he toasted one side of himself to a dark red, the while the other half of him was goose-flesh from cold. On a hot day he wielded a palm-leaf fan, swore at the heat, mopped perspiration and let it go at that, to the sacrifice of his comfort and efficiency.

For convenience in his office he either wrote his own letters, or dictated them to a long-hand or a short-hand secretary. If he wanted to add a column of figures, he did it as he had done it in school, and had it checked by a clerk who used the same method.

Arrived again at home by the "hay burner" line, he was again at the mercy of space and time. To communicate with neighbor or friend meant a visit, to go to the theatre a "Sabbath day's journey" or an expensive cab. In sickness the summoning of the doctor by child, friend or neighbor meant dangerous delay. In case of fire he was dependent on the swiftness of man or animal for its extinguishment. Bolts, bars, locks and latches were his sole protection against burglar and thief. At night he did a round of manual "chores" before he could retire in comfort and peace. Everything that he did was done in a way, or by a method that we, today, only a generation away, would call most uneconomical and inefficient. His whole daily life—commercial and domestic—was only a slight improvement in materials and methods over that of the savage.

Now, see what electricity has wrought! In home life let us take the "House Electrical." Over it, controlling it, guarding it, is the electrical "master clock" with a dial or a pointer for every need—self-winding, regulating and setting. No need to do anything but set the proper hand or pointer to its right position and "The Slave of the Lamp" does the rest untiringly and unerringly.

Mr. and Mrs. Aladdin now go to rest without a household care on their minds. If a burglar tries to break in, a gong sounds its deep alarm both inside and outside the house, a bright light flashes in his face and an imitation pistol-shot sends him flying. If a fire starts, an electric thermostat instantly informs the clock, which turns in a fire alarm or turns on sprinklers or fire-killing gas. When the butcher, the baker or the milkman bring their daily morning wares they put them into a "turn-table-closet" open to the outside, press a button, the closet electrically revolves, the wares are deposited inside or shunted into the electrically-cooled refrigerator—all safe from the early morning thief.

At the proper time a thermostat in every needed room will inform the master clock as to the temperature therein, and electric heaters or cool air inlets are started or stopped so that the temperature of the rooms may be "just right" when the family enters them.

At rising time the clock turns on the necessary lights and rings a persistent buzzer near the bed—a sound inaudible outside of the room but exasperatingly apparent to its occupant, and only to be stopped by turning a switch at the other side of the room. At the same time the clock turns into the bath tub water of the right temperature, electrically heated or cooled and heats the shaving water. If needed, an electrical vibrator will loosen up the sleep-laden muscles; an electrical shampooer will clean and freshen the hair; an electrical hot-blast fan will dry it. If Mr. Aladdin keeps a personal man servant—that individual has been previously awakened and has, electrically, pressed and brushed Mr. Aladdin's business suit and polished his shoes.

Meantime the cook, electrically awakened at the proper hour, has received Mrs. Aladdin's orders for breakfast through the household telephone, has turned a few switches and, without waste of time or heat, has smokelessly and smellessly prepared a perfect breakfast, which can be electrically kept hot for anyone late in coming down, and can be sent instantly to the table-side by a electrical dumb-waiter.

If Mrs. Aladdin desires that she shall have a hand in the preparation of the meal, electric toasters, chafing-dishes, grids and percolaters stand unobstrusively and ornamently at hand to toast, broil, grill or boil as desired. Breakfast over, Mr. Aladdin telephones to the garage for his electric coupe, or walks a block to a bright, clean, electrically well-warmed and well-lit electric street car, and is whisked to his business safely and comfortably.

And all day long "Master Clock" or his aides electrically smooth the household way for Mrs. Aladdin. She need not stir from chair or lounge if she did not so desire, for the household phone puts her into instant communication with housekeeper, secretary, cook, gardener or chauffeur and the touch of a switch gives her "Central" and her tradesmen, acquaintances and friends.

Thermostats, electric heaters and ventilators keep the atmosphere of all rooms clean, fresh and at the right temperature; electric vacuum cleaners noiselessly, dustlessly and sanitarily clean rugs, curtains, pictures, floors and walls; for the evil and germful

(continued to page ten)

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

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Advertising rates on application.

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AN OPEN LETTER FROM JUPITER HENRY L. DOHERTY

I AM convinced that The Jovian Order can within the year, accomplish a tremendously constructive work now being planned; one that will be beneficial to all its members, and will bring to it general and permanent recognition as a necessary factor in the development of our industry.

As one result, there should come the solution, in the best interests of individual members, of the problems in the relation between the Order and existing local Leagues. Followed by the establishment, on a sound basis, of a large number of local chapters in cities not now offering that advantage to Jovians there.

Thus automatically caring for the question of adequate service to the individual for the price asked.

To do these things the Order MUST have NOW not only the continued affiliation and support, but the CONFIDENCE of its members. Its history, particularly that of the last five years, is bright enough in accomplishment and in consistent evolution and progress in the right direction to justify you in believing it will "deliver" to the limit of the support given it.

It has demonstrated its willingness and ability to solve and eliminate problems and obstacles in a convincing enough way to give it the RIGHT to expect FAITH from you as to future results.

As I see it, the one element more than any other that is retarding the most rapid expansion of the usefulness of the Order is that of too much unjust recrimination and complaint, and too little appreciation of the splendid winning fight The Jovian Order has made up to this time.

Our esprit de corps must not be allowed to perish, because there is no reason why it should not be higher today than ever before. A big PUSH now, with our heart in it, and we will have carried the ball over the goal toward which the organization has struggled so worthily for many years.

We want YOUR shoulder with the rest!

* * * *

VALUE OF CO-OPERATIVE ADVERTISING

THE VALUE of co-operative advertising is becoming more and more apparent each year. When we say co-operative advertising we allude to systematic advertising campaigns, not the joining together of business concerns to get cheap space. The latter method can merely be construed as an attempt to economize, frequently at the expense of a lot of result-getting punch, the very factor that makes real co-operative advertising a valuable method of exploitation.

The elements that make for development in co-operative advertising are proving the worth of such campaigns wherever they are conducted and the results analyzed. Systematic campaigns in which central stations, manufacturers, jobbers and contractors have united have produced a valuable amount of new business, and have extended the fields to new limits.

Perhaps to no other industry is this fact so potent as it is to the electrical industry. In old established lines, individuals must look solely to procuring their share of the trade that exists in the particular line with which they are connected. A certain amount of food clothing, etc., will be consumed, a certain number of vehicles will be purchased, a certain amount of building will be done. The kinds of food consumed, clothing worn, vehicles bought and material used will depend almost solely on the popularity of such articles. While this holds true of electrical appliances (as it would be foolish to try to discredit the value of popularity or familiarity) the undeveloped still presents an important factor.

As one illustration of the importance of undeveloped business take the fact that but 27.2 per cent of the homes of the country are at present lighted by electricity. Should we admit that it was impracticable for one-half of the remaining homes to use electricity, there remains 36.8 per cent of the entire field to be developed. Add to this fact another that is equally as well known,

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that but approximately 25 per cent of the homes at present electrically lighted are fully sold on appliances, the field for development will be seen to rank by far the more important.

Every man knows the value of co-operative influence. Human nature is more responsive to the sway of combined than to single influences. The assertion of two men carries greater conviction than the assertion of one. If you pick up an advertising medium and read of the value of an electric iron in Jones' advertisement, then in another medium Smith tells you what a good thing it is, then Brown, Robinson and a few others tell the same story, conviction is bound to result at some stage.

The value of co-operative advertising to develop new business lies in the fact that concentrated stimulation asserts a greater influence on public opinion. The noise of a hundred drums being beat at the same time can be heard much further than the noise of one drum. This is the principle upon which co-operative advertising carries a greater force of conviction to further limits.

There is no better illustration to be had than the success of the two "electrical weeks" held during the past two years. An appreciable amount of new business has resulted from each demonstration.

The principle may be applied to the development of the field for appliances of every kind. Co-operative advertising concentrated on some class of appliances during a fixed period is bound to bring better results as a whole than unorganized advertising scattered at random over a longer period.

* * * *

J. J. CARTY

DO NOT be misled by the caption of the biographical sketch of the life of J. J. Carty published in this issue of The JOVIAN. As mentioned in the last issue of the magazine Mr. Carty became a member of the Jovian Order, December 26. While that fact opened the way for the publication of his biography, the main incentive for the article is the historical value of the achievements with which his name has become identified.

As one reads of these deeds, the impression is gained that the wonders of the art of communication that have been accomplished can only be compared to a realization of the fairy tales of our childhood.

Were it not for the fact that J. J. Carty's personality so closely interweaves with the marvelous achievements of telephony, both wire and wireless, it would be very easy to forget that we were reading the biography of a man. Rather, it would seem, that we were exploring the mysteries of some new magic that has unfolded itself to humanity.

The dreams that Jovian Carty has made come true have an apparent value to commerce and industry, but back of that lies their inestimable worth in linking the human race closer together,—the influence they wield to promote progress and cilivization.

Then there is his dream for the future,—a dream of universal communication between each and every section of the earth. It is a great vision. But after reading what this man has accomplished who will deny its probability?

* * * *

AN ASPECT OF THE INFLUENCE OF ELECTRICITY ON HUMAN PROGRESS

HOW MUCH the progress attained by the human race during the fifty years just past is indebted to electricity would be hard to determine. This much is certain; the part it has played in dispensing information has been wonderful. By supplying a means of communication between the thickly populated centers and those remote it has increased the distribution of news of current events many hundred times.

Taking this feature of electricity, alone, into consideration, the effect it has had in quickening thought can readily be understood. Prior to its advent news came to the outlying districts at very irregular periods. It was often incomplete. Days or

WM. GLOECKNER, Po. 2370V, Fifteenth Pluto, of the V. V. Fittings Company, Philadelphia. Since his Rejuvenation at Philadelphia, October 8, 1909, Jovian Gloeckner has been active in the affairs of the Order. Former Triton, M. H. Jones, Po. 2928, related SOME of the activities at the Indianapolis Convention.

weeks frequently elapsed between mails. During this time discussion was devoted to the subject of the last news received. There was little to stimulate thought, nothing to promote the art of quick thinking.

Imagine a group of citizens in this age of quick communication assembling night after night for a week to discuss one topic of news of ordinary importance. There is not a backwoods town in the country where it would not be "stale" within twenty-four hours.

From the mere force of necessity, the average human mind has been proded to keep up with the trend of human events. No man wants to be considered a back number. In order to keep informed today he must master the details of a hundred occurrences where he was required to master but one fifty years ago. This naturally developed his ability to think more quickly. And, after all, progress depends a great deal on the activity of thought.

* * * *

ACTIVITY AT NEW ORLEANS

THE ELECTRICAL industry in general and the New Orleans Jovian League in particular is playing an important role in the "metamorphosis" of that city according to the local press. This statement was made and the appellation applied to the activities of that body in an address made before the League, February 7, by Harold W. Newman, commissioner of public safety.

The tribute came after a period of activity in which the local Jovians contributed valuable assistance in promoting the "Safety Movement," "America's Electrical Week" and various other civic movements.

At present the League is joining with members of the National Electrical Contractors' Association to make their coming convention one of the most successful affairs in the history of that organization.

A Rejuvenation is set for March 17, and every effort will be made to make the affair a record breaking event for the League.

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A Story of Mighty Deeds Electrical

(continued from page seven)

days of the broom and feather duster—disseminators of filth and disease—have been electrically abolished.

In the kitchen, heat, flame, smoke and smell have likewise been eliminated; the electric range—clean, neat and convenient, a wonderful conservator of heat—reigns supreme among cooking apparatus, and all around and about are little motor-driven "culinary tricks" that shorten the hours and lessen the labor of the "greatest plague of life."

In the pantry the maid—or butler—clean and ploish silver or cutlery on electrically-driven buffers; in the laundry electrical washers, dryers, mangles and flat irons ease labor, save time and give more perfect results; and in garden and garage electric appliances take the place of tiresome hand work.

And this is the beauty of electricity—one need not be Mr. and Mrs. Aladdin to have nearly as thorough an electrical service. Mr. Suburb Bungalow can, with small expenditure, run Mr. Aladdin a close second.

Mr. Bungalow being chauffeur, gardener, butler and "man" and Mrs. Bungalow constituting the rest of the household "help," there is no need of the household telehpone—the one to "Central" gives them the range of friends, acquaintances, stores, doctor, etc. Also, thermostats and master clocks may be omitted. But a very little extra expenditure in installation of the electric system will have supplied "base-board receptacles" galore in every room; and fans, piano lamps, portables, electric heaters, cooking appliances, flat irons, crimpers, water heaters, heating pads, vacuum cleaners and the many other small, cheap and economical appliances and attachments may be "plugged in" in every room, for the comfort, pleasure and health of the occupant.

A very little more money spent on the installation of two and three-point switches and the "automatics," and Mr. Bungalow may light his way in front of him and around him and all over the house; may put out the light behind him, may have a light in closet, garret, garage, chicken house or out house by the opening of the door.

A very little more outlay and a few inexpensive electrical batteries give every window and door a sleepless electrical watchman throughout the night; with a "push-button switch" under the pillow a night light may be controlled to show the time on the alarm clock face, "to kill the dreadful dark" for the little ones or, by very little further expenditure, to flood the house with light from every socket whether other switches are turned off or not.

And to him, as to his rich neighbor, comes the little—or big—electric flash light, very small in cost, lying, dormant in expense, when not in use, ever ready to turn on its bright, steady, safe, dependable beam of light, independent of oil, gasoline, gas or tallow, small enough to go in the pocket, large enough to lighten a room; an electric candle with a thousand uses, that cares not for wind, weather, temperature or position, that only costs the occasional renewal of little bulb or small battery, that only needs the touch of a finger to light it,—this and all the other small house equipment is as cheaply accessible to Mr. Bungalow as to Mr. Aladdin.

And not only that, but by the extension of country transmission lines, Mr. Reuben Farmhouse may emulate either of his city neighbors, may not only have his "House Electrical," but may add to it his "Barn Electrical" and his "Farm Electrical," may pump water, cut wood, feed and ensilage; may milk, churn, plow, reap, and thresh by electricity, the while the telephone gives him instant access to stores, markets, friends and "all the world beside."

He can have all the electrical comforts of the city home and be "his own boss and landlord"—and he owes it to electricity for his emancipation.

But let us follow Mr. Aladdin to his office. Be it on the second or 'steenth floor, he climbs no stairs; an electric elevator hoists him smoothly and rapidly to it, brightly lit, and with cheerful electric radiators, or electric foot warmer under his desk. His mail has been opened by an electric envelope cutter and dated and timed to the minute by an electric stamp. He consults his subordinates over his private phones, he makes his business arrangements and engagements, in the town or out, through "Central" or "Long Distance." He wastes none of his own time nor that of his subordinates by stenographic dictation or autographic notes. At his hand is the electric dictagraph and into it he puts his letters, his orders, his notations as he has time to come to them. Everywhere is "electrical efficiency," a doing away with manual labor, with unreliable human memory, with defects of the "human element."

All day long—be he Mr. Aladdin or Mr. Bungalow—the electric current surrounds him, works for him, smoothes his pathway in business or pleasure, saves him time, effort, energy and worry, increases his efficiency a hundred-fold, lengthens his day, shortens his working hours and tirelessly works day and night for his safety comfort, convenience and pleasure!

And think of the cheapness of it! A kilowatt—a horsepower and a third—a great Percheron draught-horse—at your service for a few cents an hour! A horse that will multiply himself by the mere turning of a switch, that will divide his enormous power among a hundred small and useful devices if you wish it. A horse that has no diseases, neither does it balk, shy or run away. A horse that never sleeps or tires, that starts, stops or slows at a finger touch, that needs neither whip nor spur—"electricity."

It has come to be the all pervading spirit of the day, not only in the countries that we call "civilized" but from "Greenland's icy mountains to India's coral strand." The big game hunters in Africa, the explorers in South American tropics, the searchers for the poles, all carry with them, as a necessity, some form of electrical device.

There is no escape from its influence; one may go up in the air, down into the bowels of the earth, under the water or leagues from any human habitation, and the wire or wireless will follow him and keep him in touch with his fellows.

In the great war now going on electricity plays a major part. Electric fuses and detonators fire cannons and mines; electric range finders direct the aim; the telephone is in the first trench and the wireless hums over every battle field. High voltage electric current adds to the terror and destruction of the barb wire entanglements; electric search lights turn battle night into battle day. On and under the war-waters the super-dreadnaughts, the torpedo boats and the submarines use electricity in its varied forms; every belligerent's harbor is guarded by mines electrically connected and fired electrically at the pressing of a far distant key. In evil hands the most beneficient agent may become a powerful instrument of wickedness. It is not the fault of the electric current that misuse perverts it.

We are so used to some of the manifestations, effects and results of electricity in our daily life, they have become so much a part of that life, such necessities of civilized existence, that we not only do not appreciate them but we hardly recognize them.

"Undue familiarity" with electrical effects has not "bred contempt" but it has bred indifference and negligence. Time was when anything "electrical" was a thing of wonder and an "electrician" was a marked man; today we accept each new electrical dicovery, invention or application as a mere matter of course and the "electrical engineer" who has displaced the "electrician" is only one of the common herd!

The only way to realize the great part that electricity plays, is to go back fifty years and consider what existence meant without it; or, to take the present daily life, item by item, and follow each item back to its source. If the latter is done, there will be found a point where, directly or indirectly, electricity has created, modified, changed and always bettered the result.

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Our houses, our food, our drink, our education, our transportation, our communication, our pleasures, our penalties, our politics—even our religion—bear the "electrical brand" somewhere on them, and to their benefit, for despite the evil uses of electricity in war, its greatest applications, its most far reaching effects have been for human safety, convenience, comfort, health and pleasure.

The purpose of this treatment of electricity's development, the lesson to impress, the moral to draw is that those who manufacture, who sell, who distribute, who install electrical materials and apparatus, are not merely filling the world full of generators, motors, wires, lamps, flat irons and hair crimpers, their business is, actually, much more than that. They should realize that there is more involved than the money there is in it. They should consider another side than the mere commercial and mercenary one. It will not cost them anything to put a little imagination into their business; to strew a few flowers of fancy along the dry-paved commercial path ways; to gild and bejewel the wares they sell.

Members of the electrical business, representatives of every branch of the science and application of electricity are, one and all, benefactors of the human race. Every peaceful "thing electrical" that is made, sold or placed,—that much is done to forward a better civilization; that much to eliminate or reduce manual labor—the tool of the savage; that much to aid material progress and, through it, ethical advancement.

They who place a little motor, a battery or some small electrical appliance may be the means of starting, in the mind of some electrical James Watt, a train of thought that will evolve as great an improvement and advance in electrical application as was the steam engine over the bobbing lid of the famous tea kettle. They are not mere makers and sellers and placers of electricity, they are missionaries to carry the electric light and its cohort of electric comforts, conveniences and pleasures into the dark places of commercial and family life.

The electric business lends itself, as does no other business, to the realm of imagination, and he who is only intent on dragging the dollar out of it, and cares not to lift his eyes to its higher possibilities is missing a large proportion of the real pleasure of his livelihood.

The electrical "business" is not a business such as others, it is an art, a science to which everything is possible if it is made so, if those who handle it will look just a little beyond the mere commercial side of it. They are making today the electrical environment of today and tomorrow—the "daily life" of the minute and the future—they should make their part worthy of the object, for if that object—electricity—fulfills its apparent destiny, it will be the physical savior of the world, and of it shall be written the great tone-poem of the universe and it shall be sung to "the music of the spheres"!

JAS. R. POLLOCK, Po. 18675, Fifteenth Vulcan. As announced in the February issue of the Jovian, it was through Jovian Pollock that J. J. Carty filed his application for Jovian membership.

JOVIANS LOOK!

THE Jovian Constitution provides that a ballot be published here on which each Jovian may indicate his preference as to any individual for any elective office. The ballots are to be handed to the Nominating Committee for their information and guidance. Fill it out and mail to

THE JOVIAN ORDER

SYNDICATE TRUST BLDG. ST. LOUIS

THE JOVIAN ORDER
SYNDICATE TRUST BLDG.,
ST. LOUIS

My preference for (state name of office)

.....

for the next administration is.....

.....Po.....

(Sign here)

.....Po.....

City..... State.....

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SOCIETY OFFERS PRIZES IN "WIRE YOUR HOME TIME" CONTEST

PRIZES aggregating $1,250 will be awarded by the Society for Electrical Development, in a contest to be staged beginning April 1, and ending May 15, next. Territory has been designated and the prize money divided with the view of giving all sections an equal chance. The arrangements divide the territory of the country into classes according to population. Cities of under 15,000 inhabitants comprise the first division, those between 15,000 and 50,000 the second, 50,000 to 100,000 the third, 100,000 to 500,000 the fourth, and over 500,000 the fifth.

The prizes will be awarded to solicitors securing the largest number of contracts in the varous territories, during the six weeks of the contest, and will range from $150 for the first, to $10.

The details of the campaign were worked out at the meeting of the committee January 18.

Members of the "Wire Your Home Time" committee in the accompanying reproduction are left to right: Robert Montgomery, Po. 6147, Statesman-at-Large, Louisville, Ky.; P. B. Zimmerman, Po. 7305, Cleveland (representing N. H. Boynton, Po. 5604V); J. M. Wakeman, Po. 574, Statesman-at-Large, New York; G. M. Sanborn, Po. 1460, Indianapolis, chairman; Elliot Reid, Po. 12008, New York; T. J. McManis, Po. 6495, Harrison, N. J.; M. A. Oberlander, Po. 2520, New York (representing E. W. Rockafellow, Po. 5408); J. T. Kelly, New York; M. S. Seelman, Jr., Po. 3653, Brooklyn; A. J. Edgell, Po. 17196, New York; H. C. Heidrich, Po. 14439, Statesman for New Jersey, Newark; H. W. Alexander, Po. 17191, States-at-Large, New York; E. M. Hunt, New York, and Hill Griffith, Po. 18661.

"Wire Your Home Time" Committee.

ANNUAL ELECTION OF OFFICERS AT LOUISVILLE

TWO TICKETS for offices of the Louisville League, the personnel of each including some of the most popular members of the Order in the city, aroused an unusual amount of interest and brought an attendance of 140 to the banquet rooms of the Hotel Tyler on election night.

The contending tickets were designated "red" and "blue." That nominated by the regular nominating committee being designated by the crimson appellation, and the ticket placed in opposition by a voluntary nominating committee taking the ethereal cognomen.

After the 'lectioneering and the balloting were over the tab of tellers revealed that the "blue" adherents had predominated. Reports state that it was a "hot" election, and returns from the outlying districts were eagerly awaited to decide the winners.

Those elected were: President, F. V. Gantt, Po. 12526, manager, General Electric Company; vice-president, W. S. Clark, Po. 1220, secretary, Jas. Clark, Jr., Company; secretary-treasurer, C. C. Dicken, Po. 16660, commercial department, Louisville Gas & Electric Company; directors, P. S. Pogue, Po. 13325, general manager, Home Telephone Company; J. B. Riley, Po. 5297, of Westinghouse Lamp Company; F. H. Miller, Po. 16670, superintendent motive power, Louisville Railway Company, and J. O. Bland, Po. 13285, secretary-treasurer, Bland Electric Company.

The banquet that followed the election was one of the most delightful affairs ever given by the League. It was held in the new banquet hall just added to the Hotel Tyler.

STARK COUNTY JOVIAN LEAGUE

AT a meeting held at Massillon, Ohio, on the evening of February 1, Jovian delegates from the towns of Canton, Alliance and New Berlin joined with those of Massillon in the formation of a League to be called the "Stark County Jovian League" and elected officers for the ensuing year. At the conclusion of the election and adoption of by-laws the secretary was instructed to apply for a Jovian Charter.

The name of the newly formed League was adopted for the reason that the four towns represented are situated in Stark County. By uniting a much better organization, it was felt, could be effected.

Officers elected were: President, O. C. Acuff, Po. 10590, First Tribune, business manager, Massillon Gas & Electric Company; vice-president, H. F. Heyman, Po. 14294, business manager, Alliance Gas & Power Company; secretary-treasurer, R. E. Lane, Po. 8422, of the Canton Electric Company. The executive committee elected are: R. G. Vincent, Po. 8424, Ohio State Electric Company; H. A. Horner, Central Union Telephone Company; B. G. Cope, Cope Electric Company, and W. W. Steele, Po. 14896, Hoover Suction Sweeper Company.

ELECTRICAL CONTRACTORS OF MISSOURI ELECT OFFICERS

ELECTRICAL contractors of the State of Missouri held their annual meeting at the Sexton Hotel, Kansas City, January 20. Fred B. Adam, Po. 847, presided as chairman. The meeting was an interesting one, a number of important papers being read and addresses made.

Discussion of the advisability of securing a law in the state governing electrical construction resulted in the decision that a state law would probably be based on national standards and would help to maintain standards in cities and would be beneficial in connection with suburban construction.

The following officers were re-elected to preside during the ensuing year: Fred B. Adam, Po. 847, St. Louis, president; William Koenemann, Po. 800, St. Louis, first vice-president; Robert Baker, Po. 16549, Kansas City, second-vice-president; A. J. Burns, Po. 13798, Kansas City, secretary; E. H. Heath, Po. 839, Kansas City, treasurer; L. E. Reid, Po. 775, St. Joseph, director, and A. Penn Denton, Po. 1415V, Kansas City, state director.

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PERSONAL POINTERS

Though old acquaintance be forgot
and days of long ago,
A name may bring to memory some
friend we use to know.
At first it stirs a hazy thought,
"Do I remember him?"
And then a smile, "Why sure I do—
By golly, that is Jim!"

* * * *

WILLIS L. ADAMS, Po. 6189, of Buffalo, consulting engineer, has been elected president of the Niagara section of the National Electric Light Association.

* * * *

J. W. TABB, Po. 6259, manager of the Western Electric Company at Buffalo, N. Y., has moved the offices of the company to 709-711 Main Street, in that city.

* * * *

G. H. Lindsey, Po. 18538, formerly connected with the St. Louis office of the Century Electric Company, was recently placed in charge of the Rochester office of that company.

* * * *

L. A. FERGUSON, Po. 12249, vice-president of the Commonwealth Edison Company of Chicago, was recently elected a director of the civic industrial division of the Chicago Association of Commerce.

* * * *

J. D. A. CROSS, Po. 2222, has been appointed manager of the heating device sales of the General Electric Company, with headquarters at Pittsfield, Mass. He was formerly district heating specialist for the company.

* * * *

HARRY T. HUGHES, Po. 2315, formerly auditor of the Denver Gas & Electric Company, has been elected treasurer of that company. Jovian Hughes has been connected with the Denver utility company since 1894.

* * * *

STANLEY M. TRACY, Po. 18826, formerly district manager of the Driver Harris Wire Company, with headquarters at Chicago, is now assistant general sales manager at the main office of that company at Harrison, N. J.

* * * *

P. W. AGRELIUS, Po. 15854, formerly commercial salesman for the Wichita (Kan.) Gas & Electric Company, is now traveling representative for the Wesco Supply Company of St. Louis, with territory in Central Illinois.

* * * *

J. KING WALLACE, Po. 17594, salesman, Commercial Fibre Company, Cleveland, has been assigned charge of the sales in the State of Ohio and Western New York for that concern. His headquarters are 829 Superior N. W., Cleveland, Ohio.

* * * *

ALBERT S. HALL, Po. 11234, has resigned as manager of the Hood River (Ore.) Gas & Electric Company and the Hydro-Electric Company, to become district manager for the Pacific Power & Light Company at Pasco and Kennewick, Wash.

* * * *

WALTER L. EASTMAN, Po. 11817, formerly equipment engineer, plant department, Southwestern Telephone & Telegraph Company, St. Louis, is now telegraph engineer, Central Telephone Company, with headquarters 212 West Washington Street, Chicago.

W. J. TROTT, Po. 2685, Fifteenth Triton, of the Fostoria Lamp Division, Grand Rapids, Mich. Owing to a rule of the Order prohibiting "boosting" any candidate in its pages The JOVIAN was not able to publish the many pleasant things written about "Bill" Trott from his district last fall when he was "runnin' for congress." As one Jovian put it, "the boys sure think a lot of Bill up here in Michigan."

* * * *

CHARLES G. ROBIN, Po. 16238, is now sole proprietor of the Charles G. Robin, Inc., electrical supplies, 48 Warren Street, New York City. Jovian Robin recently purchased the interest of his partner, Jos. Starobin. He will continue the business under the same name.

* * * *

A. H. S. CANTLIN, Po. 14949, vice-president of the Lehigh Valley Transit Company, has been elected president of the Quakerstown (Pa.) Traction Company, a subsidiary company of the corporation. His headquarters will be at the Quakerstown office of the traction company.

* * * *

H. E. MUSSON, Po. 7899, has resigned his position with the Corporation Commission, Oklahoma City, and has accepted a position as general manager with Smith & Swan, oil and gas producers, Henryetta, Okla. His headquarters are now at 617 West Main Street, Henryetta.

* * * *

BYRON T. BURT, Po. 13240, recently retired from the management of the Ruthland (Vt.) Railway, Light & Power Company. He was presented a beautiful pearl stick pin and a pair of gold cuff links by the employes of the company as a token of esteem at the time of his retirement.

* * * *

B. EARLE ACHENBACH, Po. 8122, has recently joined the sales force of the J. F. Buchanan Supply Company, Philadelphia. He was formerly with the Rumsey Electric Company. His headquarters will be at the Philadelphia offices of the Buchanan Company, 1719 Chestnut Street, Philadelphia.

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J. P. ALEXANDER, Po. 11892, First Tribune, Trenton, N. J., one of the promoters of the successful electric show held at that city December 1 to 6, during "America's Electrical Week."

CHARLES L. PILLSBURY, Po. 1789, head of the consulting engineering firm of Charles L. Pillsbury & Company, Minneapolis, Minn., recently consolidated with the firm of Vaugh & Meyer, Milwaukee, Wis. Jovian Pillsbury will remain at Minneapolis, where he will be assisted by H. J. Meyer. F. A. Vaugh will have charge of the Milwaukee offices. There will be no change in the names of the two firms at present.

* * * *

ROBERT J. SMYTH, Po. 16240, who formerly represented the Ansonia Electric Company in New York and export trade, has opened offices at 220 Broadway, New York, and will represent manufacturers desiring outlets in New York, particularly for export business. Jovian Smyth is secretary of the Export Managers' Club, a recently incorporated organization that proposes to further manufacturer's interests in export trade.

* * * *

F. W. BACON, Po. 13639, vice-president of the Lexington (Ky.) Utilities Company and the Kentucky Traction & Terminal Company, was made a director of the properties of Chandler & Company, February 1. The Lexington properties represent part of the holdings of the company. His headquarters will be at the Philadelphia office of the Chandler Company, although he will continue as vice-president of the Lexington properties.

* * * *

FREDERICK RIEBEL, JR., Po. 6443, has been made general manager of the Commercial Electric Supply Company, 42 Congress Street, East Detroit, Mich. He was formerly district sales manager for the George Cutter Company at South Bend, Ind. Jovian Riebel is a graduate of Purdue University, class of '04. Since then he has been connected with the Westinghouse Electric & Manufacturing Company, and the South Bend Power Company, at Bedford, Ind.

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N. W. GRAHAM, Po. 1629, who was formerly manager of the Holabird-Reynolds Electric Company, Los Angeles, Cal., is now head of a new company known as the Graham-Reynolds Electric Company, which is a reorganization of the old firm. R. L. REYNOLDS, Po. 11187, is secretary-treasurer of the new concern. They have recently moved to 300-302 East Third Street, where thay have more commodious quarters and better facilities for handling their business.

* * * *

EMIL ANDERSON, Po. 7805, electrical inspector of the Minneapolis Underwriters' Association, was elected president of the Western Association of Electrical Inspectors at their twelfth annual convention at Toledo, Ohio, January 25. Jovian Anderson is taking an active part in Jovian League affairs at Minneapolis. He is at present Second Tribune and vice-president of the League. He is also a member of the American Institute of Electrical Engineers as well as several other electrical societies.

* * * *

HALBERT P. HILL, Po. 8652, president, Halbert P. Hill, Inc., consulting engineers, 30 Church Street, New York, has become associated with Messrs. Fred Ophuls and J. H. McCreery. The title of the new firm is Ophuls, Hill & McCreery, with offices at 112 West Forty-Second Street, New York. Jovian Hill was formerly connected with the Allis-Chalmers Company. After opening offices as a consulting engineer he specialized in electrical apparatus, steam turbines and producer-gas equipment.

* * * *

W. R. SCHNEIDER, Po. 15757, who for the past three years has been employed by Union Electric Light & Power Company of St. Louis, in a legal capacity, has severed his connection with that company to engage in the general practice of law. His offices are 516 Central National Bank Building, St. Louis. Jovian Schneider has also filed as a candidate for alderman from the twenty-fifth ward of that city, in the coming Spring election.

* * * *

A. E. WIDEMAN, Po. 18469, commissioner, Railway, Light, Telegraph, Hydro-Electric Power and Water, Port Arthur, Ont., has been appointed chairman of the Utilities Commission of the City of Port Arthur.

* * * *

J. E. SWEENEY, Po. 6568, officiated as host for his company, the Waterloo (Iowa) Electrical Supply Company, at a dinner given the employes of the company at the Russel-Lampson Hotel, February 1. He made an address on "1916 Prosperity." C. H. Night, Po. 4828, addressed the meeting. His subject was "Fixture Installation." Jovian Sweeney announced the dinner would be made an annual affair.

* * * *

SIDNEY PATRICK, Po. 1933, representative of the Southwest General Electric Company, in Southwest Texas, has removed his headquarters to the State National Bank Building, San Antonio, Texas.

* * * *

F. P. HAYS, Po. 10645, is now representing the Electrical Appliance Company of Dallas, Texas, in their southwest territory. He was formerly with the Public Utilities Company, Smithville, Texas.

* * * *

A. W. LEE, Po. 13312, drafting engineer of the Louisville Gas & Electric Company, has been elected vice-president of the Louisville Engineers' and Architects' Club.

* * * *

JOHN J. CARTY, Po. 19428, chief engineer, American Telegraph & Telephone Company, has been commissioned by President Wilson as a major in the Signal Officers Reserve Corps. Jovian Carty was recently decorated with the Orders of the Rising Sun and the Sacred Treasure by the Emperor of Japan.

* * * *

J. C. KIRKPATRICK, Po. 10942, president, National Pole Company, Escanaba, Mich., was elected president of the White Cedar Association, at the annual convention of that organization, at Minneapolis. Jovian Kirkpatrick has been engaged in the pole industry for a number of years and is widely known throughout the Northwest. He has been connected with the National Pole Company as its president since its organization in 1906.

* * * *

C. M. & ST. P. RY. TO ELECTRIFY TO COAST

Surveys, it is understood, are being made by the Chicago, Milwaukee & St Paul Railway for the purpose of electrifying its system through the Cascade Mountains. This would mean extending the electric service of the road to the coast.

Work has been started to electrify the twenty-four mile division of the system between East Portal and Avery, Idaho. Its completion will finish the original plan of electrifying 440 miles of the system.

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AN OUTLINE OF THE WORK OF THE "ONE HUNDRED POINT" COMMITTEE SHOWING THE EXTENSIVENESS OF THE CAMPAIGN AND THE WINNERS OF THE AWARDS

PROBABLY no other movement in the history of The Jovian Order compares in extensiveness with that just completed by the "One Hundred Point Committee." When the fact is taken into consideration that the campaign embraced in the scope of its activities the plans to interview each individual, of the 19,000 who compose its membership, intelligently and effectually, a little thought on the subject will reveal the proportions of the task.

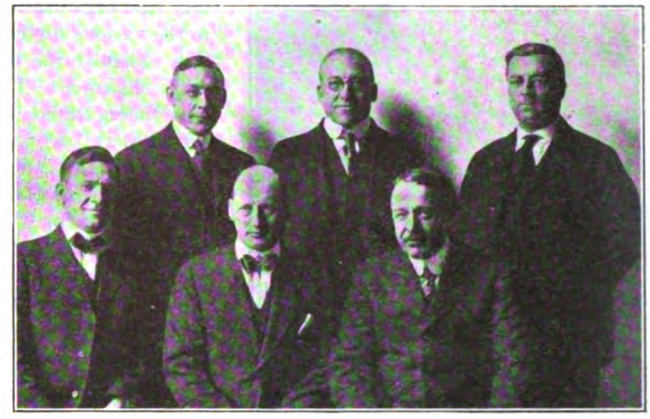
To the committeemen who were in charge of the field work the amount of effort involved in the movement is evident. Jovians are business men. They are occupied most of the time with the important affairs of their business. A number of them travel. The work of visiting them was not a simple matter of making a call at a time convenient to committeemen. Frequently appointments had to be made at inconvenient times and members of the committee being also business men, having their own affairs to consider; the sacrifices they made are obvious.

Therefore when we know that practically every member of the Order was canvassed, the credit due the loyal members of the Order who did the work can be fully understood.

The trophies and jewels which go to those who made the best showing are but emblems of the results they achieved for the cause of Jovianism. The work that each member did, regardless of the fact that he did or did not win a prize must be held in esteem as an unselfish contribution in the interest of the Order.

The fact that the contest developed into a lively race for supremacy, and that the incentive inspired by the spirit of sportsmanship added spice to the movement, does not detract from the splendid spirit in which the work was done.

In addition to the work outlined for the various chairmen and committees by General Chairman Martin J. Wolf, Po. 6027V, that assigned his personal staff and the Central Offices comprised an enormous amount of detail. Starting with lists consisting of the entire membership, and the work of compiling records to properly classify, record and check the results, there followed supplementary lists, and numerous calls for special information from Mercury's records. In fact the condition developed in the Central Offices could not be better expressed than in the phraseology of the office boy, who remarked, "There is something doing every half-minute."



Six members of the Eau Claire (Wis.) "One Hundred Point Committee" that won the city chairmanship prize for cities of the third class. Reading from left to right members of the committee are (seated): J. A. Kellogg, Po. 18256; A. E. Peirce, Po. 6087, chairman; E. C. Dearth, Po. 17144; (standing), Holmes Ives, Po. 18253; E. S. Walsh, Po. 19392 and O. H. Moehle, Po. 18261.

The plan of organization outlined in the "One Hundred Point Committee" circular comprised, first the division of the territory of the United States into six districts and the appointment of district chairmen. The districts were arranged and the chairmen appointed in each as follows:

Eastern District, Jas. H. Betts, Po. 6765, Fourteenth Vulcan.
Central District, W. J. Doherty, Po. 2918V, Thirteenth Chiron.
Western District, T. E. Collins, Po. 9327, Fifteenth Comus.
Rocky Mountain District, J. F. Greenawalt, Po. 2308, Fifteenth Atlas.
Southwestern District, Fred Johnson, Po. 177V, Statesman-at-Large.
Southern District, W. R. Herstein, Po. 765V, Thirteenth Avrenim.

Cleveland, "One Hundred Point Committee," reading left to right. Top row: G. S. Milner, Po. 2457; R. A. Parkinson, Po. 4163; W. M. Knapp, Po. 2442. Center row: F. R. Du Guay, Po. 1678; W. C. Harrington, Po. 5623; R. S. Ingle, Po. 7277; W. G. Rowland, Po. 4511; F. P. Harris, Po. 1506. Lower row: H. S. Greene, Po. 474-2; R. S. Dunning, Po. 16471; J. M. Bateman, Po. 2610, Chairman; P. B. Zimmerman, Po. 7305; H. C. Turnock, Po. 5658 and M. H. Moffett, Po. 2935.

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A. E. PEIRCE, Po. 6087, chairman of the "One Hundred Point Committee," Eau Claire, Wis. His city was first in its class in the contest and was awarded the cup.

Then followed the appointment of 43 state chairmen and 252 local chairmen.

The work of effecting the organizations in the various districts was assigned the district chairmen. This was inaugurated by co-operation with General Chairman Wolf in appointing state chairmen, then by co-operating with the state chairmen to appoint local chairmen and in completing the committees.

As outlined in the "One Hundred Point Committee" folder, the work of interviewing the membership was under the direct supervision of the local chairmen, who were provided with lists and all needed information compiled by the Central Offices of the Order.

Report of progress was made by local chairmen to both the general chairman and the state chairmen. Dues collected were remitted to the general chairman to be credited to the local, state and district chairmen, and then forwarded to the Central Offices, where a duplicate of the records of the committee work was kept to assure accuracy.

Under the rules of the contest to quote from the committee circular: "Each division chairman shall be given a suitable piece of jewelry to, for all time, signalize his activity as a divisional executive of the 'One Hundred Point Committee.' He shall also be permanently granted the Honorary Degree of Vulcan."

The highest awards were those provided for cities. The cities were divided into three classes according to membership. Those of over 350 comprised the first class; those between 150 and 350, the second, and those between 40 and 150, the third.

The three cities who retained (as evidence of dues paid), the nearest to the actual number of Jovians, as recorded in Mercury's office, were awarded handsomely engraved cups of not less than one hundred dollars in value. There are:

First, Cleveland, Ohio, J. M. Bateman, Po. 2610.
Second, Milwaukee, Wis., Carl Golin, Po. 12385.
Third, Eau Claire, Wis., A. E. Peirce, Po. 6087.

The five state chairmen whose state record of Jovians retained was highest and who were awarded the handsome Jovian rings and Honorary Degree of Vulcan, are:

First, Wisconsin

Chairman, R. M. Van Vleet, Po. 1094, Eighth and Ninth Mercury, Milwaukee.

Second, Colorado

Chairman, J. F. Dostal, Po. 1102, Past Jupiter Nine, Colorado Springs.

Third, Minnesota

Chairman, O. A. Rofelty, Po. 7839, Statesman, Minnesota, Minneapolis.

Fourth, Oklahoma

Chairman, H. E. Musscn, Po. 7899, Statesman, Oklahoma, Oklahoma City.

Fifth, Kansas

Chairman, J. E. Taylor, Po. 6938, Statesman, Kansas, Kansas City.

Local chairmen to the number of 23 who ranked highest in the number of Jovians retained, and were awarded the Honorary Degree of Vulcan, are:

First, A. E. Peirce, Po. 6087, Eau Claire, Wis.
Second, Holmes Ives, Po. 18253, Chippewa Falls, Wis.
Third, F. E. Belden, Po. 6245, Joplin, Mo.
Fourth, H. N. Remmington, Po. 678, Peoria, Ill.
Fifth, Carl Golin, Po. 12385, Milwaukee, Wis.
Sixth, P. H. Bailey, Po. 13347, Harrisburgh, Pa.
Seventh, J. M. Bateman, Po. 2610, Cleveland, Ohio.
Eighth, W. H. Vilett, Po. 3675, Minneapolis, Minn.
Ninth, Frank G. Frost, Po. 4015, Houston, Texas.
Tenth, H. L. Woolfenden, Po. 1062, Denver, Colo.
Eleventh, A. M. Wilson, Po. 14357, Cincinnati, Ohio.
Twelfth, L. O. Ripley, Po. 7042, Wichita, Kan.
Thirteenth, E. A. Bechstein, Po. 14892, Sandusky, Ohio.
Fourteenth, E. A. Sims, Po. 5968, Newark, Ohio.
Fifteenth, J. E. Cowles, Po. 1549, Shreveport, La.
Sixteenth, R. J. Brinkley, Po. 14497, Suffolk, Va.
Seventeenth, J. J. Thoren, Po. 14749, Bay City, Mich.
Eighteenth, E. F. Wickwire, Po. 15431, Mansfield, Ohio.
Nineteenth, C. S. Abell, Po. 3953, Keokuk, Iowa.
Twentieth, E. A. Wilcox, Po. 6830, Tulsa, Okla.
Twenty-first, A. D. Page, Po. 501, Harrison, N. J.
Twenty-second, J. C. Rush, Po. 1556, Hot Springs, Ark.
Twenty-third, Washington Devereux, Po. 2367, Philadelphia, Pa.

The forty-one committeemen who ranked highest and were awarded the Honorary Degree of Vulcan, are:

R. F. Allen, Po. 9784, Alton, Ill.
A. D. Barber, Po. 1850, Kansas City, Mo.
C. D. Benz, Po. 16046, Los Angeles, Cal.
G. W. Bixler, Po. 3192, Denver, Colo.
G. S. Blomgren, Po. 6038, Minneapolis, Minn.
R. J. Brinkley, Po. 14497, Suffolk, Va.
T. B. Burnite, Po. 3426, Denver, Colo.
L. M. Cargo, Po. 2295, Denver, Colo.
H. C. Chapel, Po. 5609, Toledo, Ohio.
G. H. Cohn, Po. 6630, St. Louis, Mo.
E. M. Conant, Po. 16200, Minneapolis, Minn.
W. F. Cozad, Po. 3435, Denver, Colo.
L. H. Cooper, Po. 5151, Minneapolis, Minn.
J. W. Davis, Po. 7097, Columbus, Ohio.
A. B. Day, Po. 10728, Los Angeles, Cal.
B. T. Day, Po. 4614, Philadelphia, Pa.
E. C. Dearth, Po. 17144, Eau Claire, Wis.
Simeon Emanuel, Jr., Po. 18500, New Orleans, La.
C. D. Fox, Po. 18163, St. Joseph, Mo.
F. E. Ghetts, Po. 13506, Chicago, Ill.
R. F. Geeseka, Po. 3668, Minneapolis, Minn.
T. G. Grier, Po. 273-16, Chicago, Ill.
W. C. Harrington, Po. 5623, Cleveland, Ohio.
W. P. Holcombe, Po. 901, Cincinnati, Ohio.
F. E. Johnson, Po. 220, Chicago, Ill.
G. B. Johnson, Po. 1587, Chicago, Ill.
Paul W. Koch, Po. 10943, Chicago, Ill.
P. Loyd Lewis, Po. 6018, Kansas City, Mo.
F. J. Lang, Po. 7828, Minneapolis, Minn.
A. L. Millard, Po. 304, Chicago, Ill.
A. L. Miltenberger, Po. 9062, St. Louis, Mo.
A. J. McGivern, Po. 3602, Chicago, Ill.
H. M. Newning, Po. 16304, Houston, Texas.
H. C. Porter, Po. 3545, St. Joseph, Mo.
P. M. Potter, Po. 5447, Kansas City, Mo.
F. L. A. Schmidt, Po. 6515, Minneapolis, Minn.
L. C. Spake, Po. 15397, Chicago, Ill.
I. R. Solomon, Po. 14260, Los Angeles, Cal.
H. C. Turnock, Po. 5658, Cleveland, Ohio.
A. L. Utz, Po. 13861, St. Joseph, Mo.
P. B. Zimmerman, Po. 7305, Cleveland, Ohio.

PRESS DATE

THE DATE for sending The JOVIAN to the press is the fifteenth of each month. While it is possible to prepare a limited amount of material for its pages, if received between the tenth and fifteenth much more attention can be given the write-up of matter received before the tenth of the month. Material containing photographs from which plates will have to be made should be in the hands of the editors by the fifth of the month to allow time to handle them properly. During the past there has been some negligence in making Rejuvenation news reports, and details of League activities have been very meager in a number of instances. **Help us give your affair the attention it deserves by mailing us a report covering the important features immediately after it is over.** THE JOVIAN.

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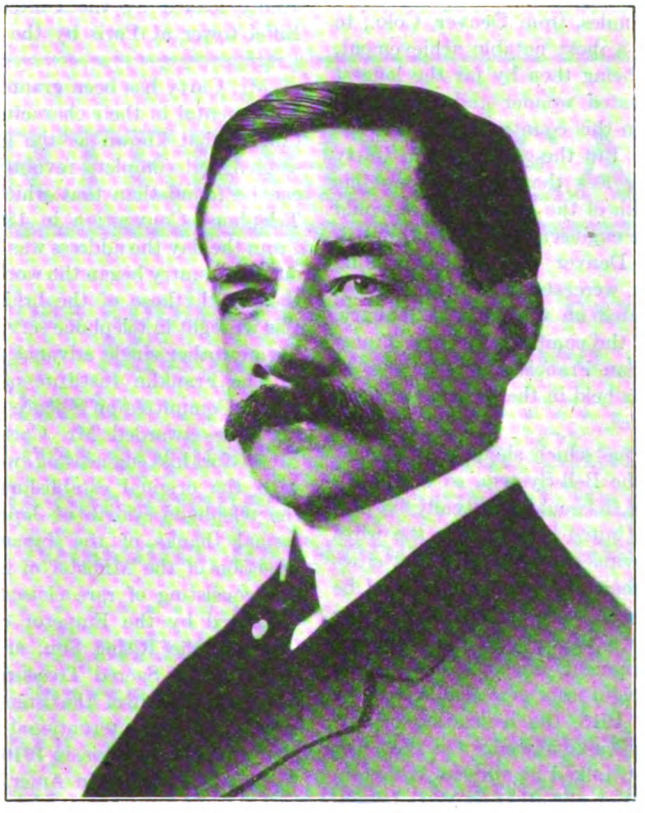
JOHN J. CARTY

Biographical Sketch, Revised to January 1, 1917

THE MOST important figure in the development of the art of telephony is John J. Carty, chief engineer of the American Telephone and Telegraph Company, known today throughout the world as the greatest of telephone engineers, as the engineer of the longest telephone line in the world, the great Transcontinental, and as the engineer who has achieved the marvel of wireless telephony.

Mr. Carty was born in Cambridge, Mass., April 14, 1861, and was endowed by nature with the essential elements for success in the telephone business—a clear, keen mind, a natural liking for mechanical experimentation, and an infinite capacity for work, to which was added a good education. He was graduated from the Cambridge Latin School with the intention of entering Harvard University, but a serious trouble with his eyesight forbade further immediate application to his books. A natural aptitude for mechanics and a leaning toward scientific investigation attracted him to the telephone business. In this business he has made an enviable name for himself during his thirty-six years' connection with it. When he began there were no text-books to go by, and he had to join the band of pioneers blazing their way by tedious experimentation. There was no such thing as an electrical engineer, and much of what today represents the basis of telephone engineering is founded on what such men as he evolved from the hard school of experience.



J. J. CARTY, Po. 19428, who recently placed his seal of approval upon the object and work of The Jovian Order by affiliating through Congressman J. R. Pollock, Po. 18675, of New York City.

His first employment was in 1879, with the early Telephone Dispatch Company of Boston, where he made a number of interesting contributions to the art of telephony—contributions that were of unusual value and that since have become permanent features of the art. Under his direction was installed at Boston the first multiple switchboard, which was at that time the largest ever put into use. For the "express telephone system he designed and installed the first metallic circuit multiple switchboard to go into service. Some of the fundamental features of this board are in all of the boards of today.

In 1887 Mr. Carty took charge of the cable department of the Western Electric Company in the East, with headquarters at New York. In this capacity he studied cable manufacture and laying and introduced a number of improvements, having charge of all of the important cable-laying projects which were carried on for some time in the eastern cities. He then took charge of the switchboard department of the Western Electric Company for the East, and under his direction were installed most of the large switchboards of that period, among which was the original Cortland Street multiple board. During this time he made a number of important improvements in switchboards which have since become standard practise.

He was the first to demonstrate practically how to operate two or more telephone circuits connected directly with a "common battery," and about 1888 installed common battery systems in a number of central offices for the supply of operators' telephone. From these early experiments have grown the standard common battery system now generally employed.

Although charged with serious practical engineering problems, Mr. Carty has found time to follow to some extent his strong natural inclination for original research. He made an exhaustive investigation into the nature of the disturbances to which telephone lines are subjected, and gave the first public account of his work in a paper entitled "A New View of Telephone Induction," read before the Electric Club on November 21, 1889. The view put forth in the paper was revolutionary, but nevertheless, after being checked by numbers of experimenters in this country and Europe, received universal acceptance, and is the one now adopted in all works dealing with the subject. In this paper he showed the overwhelming preponderance of electrostatic induction as a factor of producing cross-talk, and proved that there is in a telephone line a particular point in the circuit at which, if a telephone is inserted, no cross-talk can be heard. The paper also gave direction for determining this silent or neutral point, and described original experiments showing how to distinguish between the electrostatic and electromagnetic induction in telephone lines.

On March 17, 1891, Mr. Carty made additional contributions to the knowledge of this subject in a paper before the American Insititute of Electrical Engineers entitled "Inductive Disturbances in Telephone Circuits." This paper might better have been called "The Theory of Transpositions," because in it was made known for the first time precisely why it is that twisting and transposing telephone lines render them free from inductive disturbances.

In 1889 he entered the service of the Metropolitan Telephone & Telegraph Company, now the New York Telephone Company, for the purpose of organizing all of the technical departments, building up its staff, and reconstructing the entire plant of the company—converting it from grounded circuits overhead and series switchboards to metallic circuits placed underground, and to the then new bridging switchboards. In carrying out this work he selected and trained a large staff of young men fresh from college many of whom have since attained positions of prominence in the telephone field. In the development of the personnel of his department, Mr. Carty has taken a particular pride, looking to the welfare of those already engaged, and, through his touch with prominent technical educators, adding each year to this staff from the graduating classes of our principal technical schools.

Under Mr. Carty also the reconstruction of the New York Telephone Company's plant was carried out the second time, converting it from cables and switchboards of the old type to modern cables and the common battery switchboard, and pro-

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viding for the extraordinary extensions which today constitute the comprehensive telephone system of New York. In 1906 Mr. Carty delivered an important paper on "Telephone Engineering" before the American Institute of Electrical Engineers.

Mr. Carty was appointed chief engineer of the American Telephone and Telegraph Company in 1907, immediately after Mr. Vail became president of the company. In that position he was responsible for the engineering work of the Bell System, and under his direction most important developments have been carried to a successful completion in all phases of both plant and traffic engineering. At the present time it is most pertinent to mention a few of the advances made by Mr. Carty toward the complete realization of universal service in the Bell System.

By far the longest underground telephone cable in the world has been designed, manufactured, laid and placed in operation connecting Boston, Mass., with New York, and with Washington, D. C., and through this cable successful underground telephone communication over the 450 miles is daily realized.

The telephone lines and the apparatus used with them, connecting New York City with the West, have been improved and extended until, about the first of 1912, telephone conversation was possible over a distance of 2100 miles, from Denver, Colo., to New York City. This in itself was a most notable achievement, the line from New York to Denver being then by far the longest telephone line in the world, and created wonder and admiration among telephone engineers not only in this country, but in Europe and elsewhere throughout the world. But the genius of Mr. Carty was not satisfied with this—nothing less than a telephone line that would talk the length and breadth of the United States would satisfy this Napoleon of the telephone engineering world. Immediately after the completion of the Denver circuits, engineering investigations and development work were started by Mr. Carty, the results of which were demonstrated on the 25th of January, 1915, when the formal celebration of the completion of the Transcontinental telephone circuits from San Francisco on the west to New York and Boston on the east was held in the presence of most distinguished gatherings in these cities.

The vision of the wireless telephone which should supplement and extend the wire connections of the Bell System, so that, with the ordinary transmitter and receiver, it would eventually be possible to talk from any place in the United States, over the wires of the Bell System, and thence by wireless to the principal cities of all the continents in the world, where the connection would be completed by wire, or to islands, to ships at sea, and to other remote places, has long occupied Mr. Carty's mind. After a prolonged period of experimentation and development, during which important discoveries were made and successful tests were conducted over shorter distances, on September 29, 1915, the realization of Mr. Carty's dream of wireless telephony was attained. On that day Mr. Vail at his office at 15 Dey Street, talked by wire to Arlington, Va., whence his voice was carried through the ether to Mare Island, California, by means of the wireless telephone transmitting apparatus and the wireless telephone receiving apparatus which had been developed under Mr. Carty's direction. The very tones of Mr. Vail's voice and of the other speakers, who followed him, were clearly recognized by Mr. Carty, who was at San Francisco directing the experiment. On the same day one of Mr. Carty's assistants who was stationed at Honolulu, Hawaii, and provided with wireless telephone receiving apparatus, received a wireless telephone message from Arlington, Va. The towers employed in these demonstrations were kindly loaned by the United States Navy Department.

No better description could be given of the wonderful character of this achievement than is contained in Mr. Vail's telegram to Mr. Carty on that memorable occasion.

"New York, September 30, 1915.

J. J. Carty, Chief Engineer,
American Telephone & Telegraph Company,
San Francisco, Cal.

I want to congratulate you on yesterday's climax in the way of achievements, the greatest in intercommunication that the world has ever seen.

To you and the wonderful staff, created by you, the world owes a debt.

To throw your voice directly without the aid of wires from Washington to Hawaii, nearly 5000 miles, a greater distance than from New York to Paris, Berlin, Vienna, or Petrograd, and greater than that between Seattle and Tokio and Yokohama, was wonderful, but to send the recognized voice part way over wire and part through the air was still more wonderful, and was the demonstration of the chiefest use that will probably attach to the wireless as amplifying and supplementing, not substituting, the wire system and bring into conversational communication, ships, islands, and places which cannot otherwise be reached.

Your work has indeed brought us one long step nearer our 'ideal'—a 'Universal System.'

THEO. N. VAIL."

On October 21, 1915, the announcement was made of the first successful transmission of speech by wireless telephony between the United States and Europe. A group of engineers under Mr. Carty's direction succeeded in establishing communication between Arlington, Va., and Paris, France. The Arlington tower was kindly loaned by the United States Navy Department and the Eiffel tower at Paris by the French Government for this demonstration.

Mr. Carty has been granted a number of patents, some of them fundamental in their character, of which perhaps the most important is that known as the Carty bridging-bell patent. No more sudden and complete revolution in any part of the telephone art can be found than that which followed his address at the Detroit Telephone Convention in 1890 on the subject of bridging bells. From the day the address was delivered telephone engineers throughout the country began the work of removing series bells and replacing them with those of the bridging type. The improvement which this wrought in telephone service in party lines has not been exceeded by any other single advance in the art.

The Franklin Institute of Philadelphia, after an investigation by its Committee on Science and Arts, in this matter of the bridging bells, awarded Mr. Carty the Edward Longstreth Medal of Merit for his engineering work. For his services in connection with the original establishment and subsequent development of the telephone system of Japan, Mr. Carty has twice received the formal thanks of the Japanese Imperial Government, and, by direction of the Minister of State, valuable specimens of Japanese art, consisting of rare cloisonne were presented to him. He was decorated by the Emperor of Japan in 1909, with the Imperial Order of the Rising Sun, and again in 1912, with the Imperial Order of the Sacred Treasure of the Meiji.

By invitation of the French Government Mr. Carty became a member of the International Telephone and Telegraph Conference at the Sorbonne, Paris, in 1910, where he delivered a notable address, "Telephone Service in America." He was also invited to become a member of the International Telephone and Telegraph Conference at Berne, in 1914, but this conference was postponed on account of the war.

The honorary degree of Doctor of Engineering was conferred upon Mr. Carty by Stevens Institute of Technology in 1915, "in recognition of his services as engineer, scientist, inventor and administrator and as a man who has persistently employed his scientific imagination for the benefit of his fellows."

The honorary degree of Doctor of Science was conferred upon Mr Carty in 1916 by the University of Chicago. In conferring the degree, President Judson used the following language:

"John J. Carty, chief engineer of the American Telephone and Telegraph Company; engineer, scientist, inventor and administrator; significant figure in the development of the art of telephony; leader and investigator of the difficult undertaking of conveying the human voice by wire across the full breadth of the American continent; director and inspirer of the group of engineers who have recently brought credit to American science by the marvelous achievement of the transmission without wires of undistorted speech a third of the way around the earth; for these eminent services in

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science, especially for the last named upon nomination of the University Senate, by authority of the Board of Trustees of the University of Chicago, I confer upon you the degree of Doctor of Science of this University, with all the rights and privileges appertaining thereto."

The honorary degree of Doctor of Science was conferred by Bowdoin College upon Mr. Carty in 1916 "for his work in perfecting Transcontinental and wireless telephony."

The Franklin Institute of Philadelphia in 1916 awarded to Mr. Carty the Franklin Medal, the highest honor in the gift of the institute, "in recognition of his distinguised service to mankind, rendered in the field of science."

Mr. Carty is a past-president (1915-1916) of the American Institute of Electrical Engineers, of which he has been a member since 1890 and a Fellow since 1913. During all of this period Mr. Carty has filled many official positions in the Institute and has contributed much to its development. He is chairman of the Executive Committee of the National Research Council, a trustee of the Carnegie Institution, a past-president (1903-1904) and life member of the New York Electrical Society, a Fellow (1915) of the American Academy of Arts and Sciences, a Fellow (1916) of the New York Academy of Sciences and an honorary Fellow (1893) of the American Electrotherapeutic Association, to which he was elected in recognition of his valuable work in the direction of more rational methods in the use of electrical currents in medicine. His interest in education has led him to identify himself with the Society for the Promotion of Engineering Education and the National Society for the Promotion of Industrial Education, of both of which he is a member. He is a member ot the American Physical Society, the Franklin Institute of Philadelphia, the Society of Arts of the Massachusetts Institute of Technology, the Telephone Pioneers of America, and the American Association for the Advancement of Science. He is an honorary member of the Association of Railway Telegraph Superintendents, and of the Telephone Society of New York, the Telephone Society of Pennsylvania, and the Telephone Society of New England. His clubs include the St. Botolph Club, Boston, the University, the Century, Lotos, Engineers, and Railroad Clubs, of New York, and the Baltusrol Club of New Jersey. He is also a member of the Chamber of Commerce of the State of New York, the Japan Society, the John Fritz Medal Board of Award, and the Joint Conference Committee ot the National Engineering Societies.

Mr. Carty was married August 8, 1891, to Marion Mount Russell, and has one son now a student at Princeton University.

CHARTERED LEAGUES

Cincinnati has applied for Jovian Charter . . No. 1
Kansas City, Missouri, has applied for Jovian Charter . . . . . No. 2
Pittsburgh has applied for Jovian Charter . . No. 3
Minneapolis has applied for Jovian Charter . . No. 4
St. Joseph, Missouri, has applied for Jovian Charter . . . . . No. 5
Louisville, Kentucky, has applied for Jovian Charter . . . . . No. 6
Stark County Jovian League, comprising the towns of Massillon, Canton and Alliance, Ohio, has applied for Jovian Charter . . . . . No. 7
Tulsa, Okla., has applied for Jovian Charter . No. 8
Eau Claire, Wis., has applied for Jovian Charter No. 9
Harrisburg, Pa., has applied for Jovian Charter No. 10
Wichita, Kan., has applied for Jovian Charter No. 11

More Are Coming!!!

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PERSONAL POINTERS

SAMUEL H. TAYLOR, Po. 999, of the Electric Railway & Manufacturers' Supply Company, Oakland, Cal., was elected chairman of the Electrical Supply Jobbers' Association at Del Monte, January 11. Albert H. Elliot, Po. 988, was elected secretary, and T. E. Bibbins, Po. 857, member of the general executive committee.

* * * *

ALBERT HOLMES, Po. 7728, recently resigned his position with the Electric Appliance Company, San Francisco. Jovian Holmes had been connected with the company for twelve years. He was formerly assistant cashier of the Central Electric Company, Chicago. The JOVIAN has not been advised of his present connection or his plans for the future.

* * * *

E. G. ROBINSON, Po. 11242, who was until recently general manager of the Washington Coast Utilities, and formerly president of the Northwest Electric Light & Power Association, has purchased the Molalla Electric Company of Canby, Ore., which serves a number of towns in that vicinity. Jovian Robinson will devote his time to the management of newly acquired properties.

* * * *

P. O. BIXLER, Po. 14360, has resigned his position as superintendent of light and power with the Northern Ohio Traction & Light Company, Akron, Ohio, to enter the industrial electrical field. Jovian Bixler has had a wide range of experience in the electrification and operation of rubber working plants, and will specialize in that line. His offices are at 737 Second National Bank Building, Akron.

* * * *

OBITUARY

T. J. MCKENNEY, Po. 12868, formerly with the Merchants' Casualty Company, Winnipeg, Manitoba, was killed in action at some point on the western front of the war zone in the latter part of November. He was doing trench duty with the Canadian branch of the Allied army at the time of his death.

* * * *

H. C. HENLEY, Po. 9045, chief inspector, St. Louis Fire Prevention Bureau, died suddenly of hardening of the arteries, January 20. He had been ailing for some time, and left his office shortly before noon to go to his home on the day of his death. He was stricken on the way and died almost instantly. Jovian Henley had been connected with the St. Louis Fire Prevention Bureau since its organization. Previous to that time he was connected with the old St. Louis Salvage Corps. Resolutions of regret and respect were adopted by the St. Louis Jovian League, a copy of which was forwarded to Mrs. D. H. Isch, his daughter.

* * * *

ROBERT S. ORR, Po. 12249, general manager of the Duquesne Light Company, died at Pittsburgh, Pa., January 24. He had been connected with the Duquesne Company, and the Allegheny Light Company that it succeeded, since 1904. Beginning with the Allegheny Light Company as contracting agent, he was made acting superintendent of the Duquesne Company and later promoted to the position of general superintendent. Jovian Orr was past president of the Pennsylvania Electric Association, and was a member of the Engineers' Society of Western Pennsylvania, the American Electrochemical Society and the A. I. E. E. He also served on the executive committee of the N. E. L. A. for several years. To him is largely due the credit for developing the system of concrete reinforcement for decayed poles now in general use.

The following resolutions were adopted at the memorial meeting held in his respect by the Pittsburgh League February 8.

"WHEREAS, the all reigning Jupiter in his Infinite Providence has seen fit to remove to the Order Grand our beloved member Robert S. Orr; and

WHEREAS, the nobility of character and the exemplary life of Mr. Orr endeared him, not only to the members of our League, but to all his associates as well, and his loss therefore is the cause of our profound sorrow;

THEREFORE be it resolved that we extend our deep sympathy to his sorrowing relatives and to his associates in the Duquesne Light Company, and place upon the minutes of our League this testimony of esteem and love for our departed member.

And be it further resolved that a copy of these resolutions be sent to Mr. Orr's relatives, to the Duquesne Light Company, and to the editor of The JOVIAN."

* * * *

JACOB E. TAYLOR, Po. 15570, of the sales department, Western Electric Company, Kansas City, Mo., died at his home in that city February 4. Jovian Taylor was not married and is survived by his sister, Miss Mary E. Taylor, with whom he made his home, and one brother. He had been active in the affairs of Jovianism in his city and the surrounding territory from the time of his Rejuvenation until his death, at which time he was Statesman for Kansas. He entered the employ of the Western Electric Company in 1904 and made many friends by his courteous manner and cheerful, optimistic disposition.

The JOVIAN extends the sympathy and condolences of the fraternity, to his relatives and friends.

* * * *

H. P. PENFIELD, Po. 8160, manager of the Ball Engine Company, died at his home in Philadelphia, December 12, from an attack of diabetes. He had been suffering from the disease for more than a year and was under treatment by physicians most of that time. Jovian Penfield's death is greatly regretted by a large number of friends. He had a pleasing personality that endeared him to the hearts of those who knew him in both a business and social way.

* * * *

WHO WANTS A JOB IN INDIA?

THAT THE fame of the commercial division of The Jovian Order is spreading to remote parts of our little old earth is well illustrated by the copy of a letter printed below. Karachi (or Kurrachee) is a seaport in the Sind Province of Bombay. It has a population of approximately 150,000 inhabitants and is situated at the extreme western end of the Indus delta, 500 miles from the City of Bombay.

The following letter is self explanatory.

Karachi (India), 1st January, 1916.

Messrs: The Jovian Order, Commercial Division,
Syndicate Trust Building,
St. Louis, Mo., U. S. A.

Gentlemen:

We have seen your advertisement in the Electrical Record.

We want a person who knows everything about how to make dry cells and flashlight batteries.

He must be well acquainted with the practical side of the question, and must have actually worked in one of the best factories.

Please let us know if you can secure for us a person of this description and his terms for coming to India.

We want to establish a large factory here for making these batteries and shall put him in sole charge of the works.

We also want a first-class canvasser for electrical goods. He must be well acquainted with how to sell.

We shall be pleased to hear fully from you by the return of post.

Thanking you in anticipation, we are,

Yours faithfully,

The Eastern Electric & Trading Company,
(Signed) G. Crushmann, Director.

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JANUARY REJUVENATION

KANSAS CITY

FOUR candidates were rejuvenated at the Coates Hotel in Kansas City on the evening of January 26. There were 52 members of the League in attendance to confer the initiation. First Tribune J. D. Todd, Po. 7968, was in charge of the affair and presided at the Joviation that followed.

Dr. W. S. Abernathy, pastor of the First Baptist Church, was the principal speaker. His address, "The Man Above the Crowd," was one of the most inspiring ever delivered before the League. The members present requested Dr. Abernathy to favor them with another address in the near future.

L. E. Shoemaker, Po. 19190, chairman of the entertainment committee and his associates were commended very highly for the high-class entertainment features they have provided recently.

* * * *

WELLINGTON, OHIO

H. C. CHAPPEL, Po. 5609, Statesman-at-Large, Toledo, officiated at the modified Rejuvenation held at Wellington, Ohio, January 26. Two candidates were initiated by Jovian Chappel. They were C. E. Dickson, owner, Dickson Hardware Company, and Claude D. Gott, manager, Wellington Telephone Company.

* * * *

JOPLIN, MISSOURI

CANDIDATES to the number of seventeen were Rejuvenated at the Elks Club, Joplin, between the hours of eight and ten on the evening of January 19. First Tribune C. C. Henderson, Po. 6249, officiated at the affair which was attended by thirteen members of the Order.

Among the prominent candidates were: B. C. Adams, general manager, Empire District Electric Company; W. D. Randall, general manager, Home Telephone Company, and C. T. Proctor, sales manager, Empire District Electric Company.

The speakers at the Joviation were: B. C. Adams, E. J. Pratt, Po. 14064, W. O. Randall (candidate), C. L. Proctor, A. M. Grall, Po. 4112, R. H. Brown, Jr. (candidate), and C. C. Henderson, Po. 6249.

C. E. Carter, Po. 4105, presided as toastmaster of the banquet.

The Degree Team that conferred the initiation were: E. J. Pratt, Po. 14064, Jupiter; H. S. Russell, Po. 2342, Neptune; E. R. Hartman, Po. 12979, Pluto; C. E. Carter, Po. 4105, Vulcan; C. C. Henderson, Po. 6249, Vulcan; G. G. Goheen, Po. 12975, Hercules; A. M. Grall, Po. 4112, Mars; G. Labee, Po. 12982, Apollo; P. J. Sergeant, Po. 6257, Avrenim, and S. E. Veeder, Po. 9652, and R. E. Baird, Po. 12966, Imps.

* * * *

TULSA, OKLAHOMA

FIRST Tribune E. A. Wilcox, Po. 6830, produced eleven candidates for the Rejuvenation held at the Chamber of Commerce, Tulsa, Okla., on the evening of January 27. Among the prominent candidates were: Roscoe M. Griffith, manager, The Electric Vehicle & Battery Company and H. D. Jenkins, purchasing agent, Public Service Company of Oklahoma.

Among the notable guests present was Fred W. Insull, Po. 10495, president, Public Service Company of Oklahoma.

The speakers were: J. M. Kinslow, Po. 16770, Second Tribune; F. W. Insull, Po. 10495, P. G. Walker, Po. 6871, R. C. Stueve, Po. 204, J. B. Lear, Po. 15849, J. E. Bell and C. J. Ehret.

Paul M. Galloway, Po. 148, presided as chairman of the banquet.

Workers deserving special mention, according to reports, were: P. G. Walker, Po. 6871, J. M. Kinslow, Po. 16770, and J. B. Lear, Po. 15849.

BAY CITY, MICHIGAN

FOURTEEN candidates were initiated at the Rejuvenation held at Bay City, Mich., January 17. The Rejuvenation was a joint affair, including the cities of Saginaw and Flint, Mich.

E. Kuhlman, Po. 44, presided as toastmaster of the Joviation held in connection with the Rejuvenation.

The Degree Team that conferred the initiation were: H. W. Brooks, Po. 13182, Jupiter; R. L. Craig, Po. 15828, Neptune; P. H. Schagane, Po. 13871, Pluto; C. A. Gordon, Po. 14151, Vulcan; H. L. Nitchky, Po. 14743, Mercury; E. J. Hay, Po. 16709, Hercules; Geo. Trombley, Po. 14750, Mars; F. E. Johnson, Po. 17444, Apollo, and L. L. Newcomb, Po. 17747, and A. B. Brow, Po. 14737, Imps.

* * * *

SANDUSKY MEETING

NOT CONTENTED with the unusual amount of Jovian activity he has been generating at Cleveland during the past two months, J. M. Bateman, Po. 2610, First Tribune, and chairman of the Cleveland "One Hundred Point Committee," accompanied by Harry Turnock, Po. 5658, and R. S. Dunning, Po. 16471, secretary, Cleveland League, went to Sandusky January 24, to assist with the meeting at that point.

First Tribune E. A. Bechstein, Po. 14892, reports the meeting to be one of the most enthusiastic the Jovians of the city have ever held. Jovian Bateman's address before the League had the effect of arousing interest in the "One Hundred Point Committee" work, and brought an eleventh-hour rush to make that League a contender for the prize.

When a statement of delinquent members was checked up and the question given consideration it was agreed to make an effort to make a clean sweep, and, barring those who were formerly members of the League but had moved away, to collect dues from every member in the city.

The New Constitution

Adopted By Fourteenth Annual Convention
October, 1916

Is Now In Printed Form
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The Jovian Order

Syndicate Trust Bldg., St. Louis, Mo.

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Practical Lessons in Electricity

LESSON TWENTY-THREE

ALTERNATING-CURRENT GENERATOR PRINCIPLES AND CONSTRUCTION

By TERRELL CROFT

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PRACTICAL Alternating-Current Generators may be Divided Into Two General Classes, thus:—(1) Revolving-armature machines, and (2) revolving-field machines. The armature is the portion of a generator in which the e.m.f. is induced. The field is the structure which provides the magnetic field, the flux of which cuts or is cut by the armature inductors, whereby the e.m.f. is induced. Each of the two classes is briefly treated below.

The Construction of Revolving-Armature Alternators is shown in Figs. 1 and 2. In general they are quite similar to direct current generators except that collector rings (Fig. 3) are substituted for the commutator. The fields must be excited with direct current, for which an independent, small direct-current generator—an exciter—is ordinarily required. Frequently the exciter-armature winding is wound on the same core with the alternator winding and a separate commutator provided for it. With such an arrangement, or when an independent exciter is direct-connected to the alternator, the revolving-armature alternator is self-contained. Revolving-field alternators are frequently built on the same frames as are used for direct-current generators.

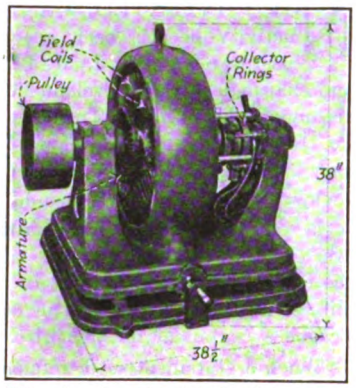

Fig. 1.—A Revolving-Armature Belted Alternator (General Electric Co., 25-kva., three phase; 17½-kva., single phase; 4 poles, 1800 r.p.m.)

A Telephone Generator or Magneto is a Revolving Armature Alternating-Current Generator. The magnetic field in this machine is produced by permanent magnets.

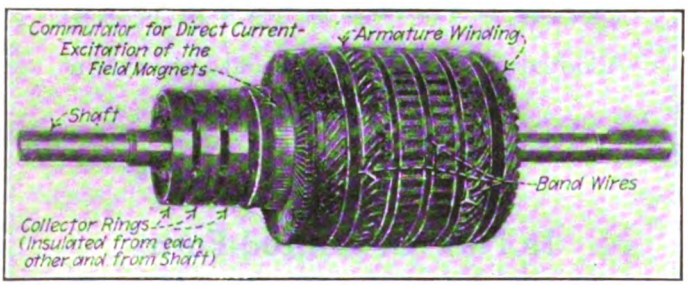
Commutator for Direct Current Excitation of the Field Magnets
Armature Winding
Shaft
Band Wires
Collector Rings (Insulated from each other and from Shaft)

Fig. 2—Complete Armature of a Revolving-Field Alternator. (This, having three collector rings, is for a three-phase machine. The construction and arrangement of single-phase and two-phase armatures is similar)

The Application of Revolving-Armature Alternators is, in practice, limited because revolving-field machines are, in the larger capacities, less expensive and in any case have better inherent characterisitcs. It is seldom that revolving-armature alternating-current generators are made for capacities exceeding 25 kva. (three-phase, 17½ kva., single-phase), or for voltages exceeding 600. Their inherent regulation is poor and the alternating voltage is impressed on the armature and collector rings which are difficult to insulate economically for high voltages. In revolving field machines the revolving parts are not subjected to high or line voltage.

The Explanation of the Operation of a Revolving-Armature Alternator is as follows:

EXPLANATION.—When the armature is in the position indicated in Fig. 3—*I* the e.m.f. impressed on the rings is zero. The e.m.fs. induced at this instant in the inductors between *B* and *C* is equal and opposite to that induced in those between *C* and *D*. Also the

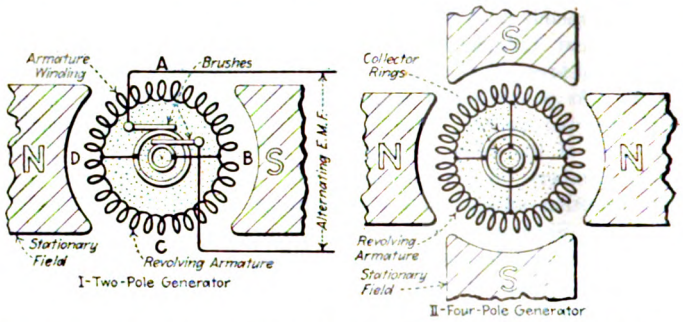

Fig. 3—Showing How Revolving-Armature Windings are Connected to Collector Rings in Alternating-Current Generators. (Single Phase)

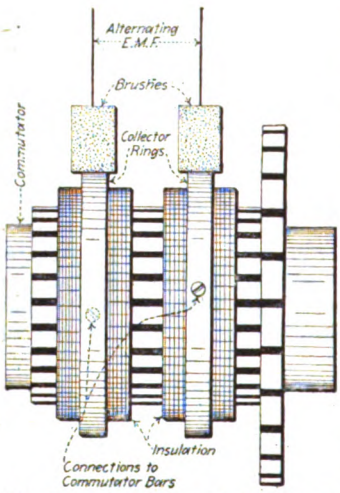

Fig. 4—Showing How the Commutator of a Bipolar Direct-Current Generator Can be Fitted with Collector Rings to Impress an Alternating e.m.f.

e.m.f. induced in winding *BA* neutralizes that in *DA*, so there is no e.m.f. across the rings. But when the armature is rotated one quarter revolution, then, at that instant, the e.m.fs. in windings *DAB* and *DCB* are a maximum and maximum voltage is impressed on the rings. When the armature has been rotated through another quarter revolution the e.m.f. across the rings is again zero. When it has been rotated through still another quarter the e.m.f. is again a maximum, but it is now in the opposite direction. These statements may be verified by applying the hand rule for determining the direction of an induced e.m.f. Thus as the armature is rotated it impresses an alternating e.m.f. on the external circuit connected to its collector rings.

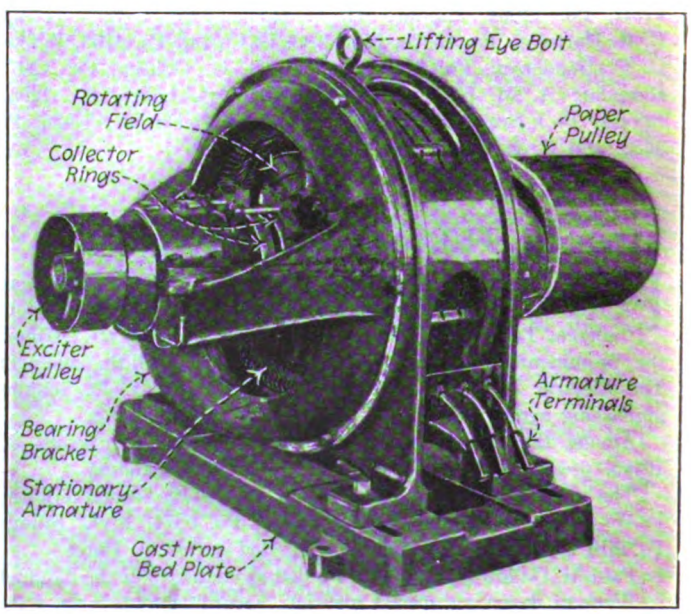

Fig. 5—A Revolving-Field, Belt-Driven, Alternator. (The illustration shows an 8-pole, 150-kva., 900 r.p.m., 2300-volt, three-phase type TRB, form B General Electric Co. Machine)

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A Revolving-Armature Alternating-Current Generator (Fig. 1) can be Arranged from any Direct-Current Generator. It has been shown that the e.m.f. induced in a loop or coil rotated in a magnetic field is an alternating e.m.f. Hence, a (bipolar) direct-current generator may be modified into an alternating-current machine by separately exciting its fields with direct current, tapping its armature winding at two diametrically opposite points and connecting each of the taps to a collector ring, as shown in Fig. 3—*I*. When an armature thus connected is rotated in the field, an alternating e.m.f. will be impressed across the collector rings. The collector rings may be attached to (but insulated from) the commutator of the armature as shown in Fig. 4. When a machine is built as an alternator, obviously, only the collector rings are necessary, a commutator is not required.

With a multipolar-field machine, there should be as many equidistantly-spaced taps from the armature winding to the collector rings (Fig. 3) as there are poles. Alternate taps connect to the same ring. The information given in this article applies to single-phase generators. For polyphase machines it must be modified.

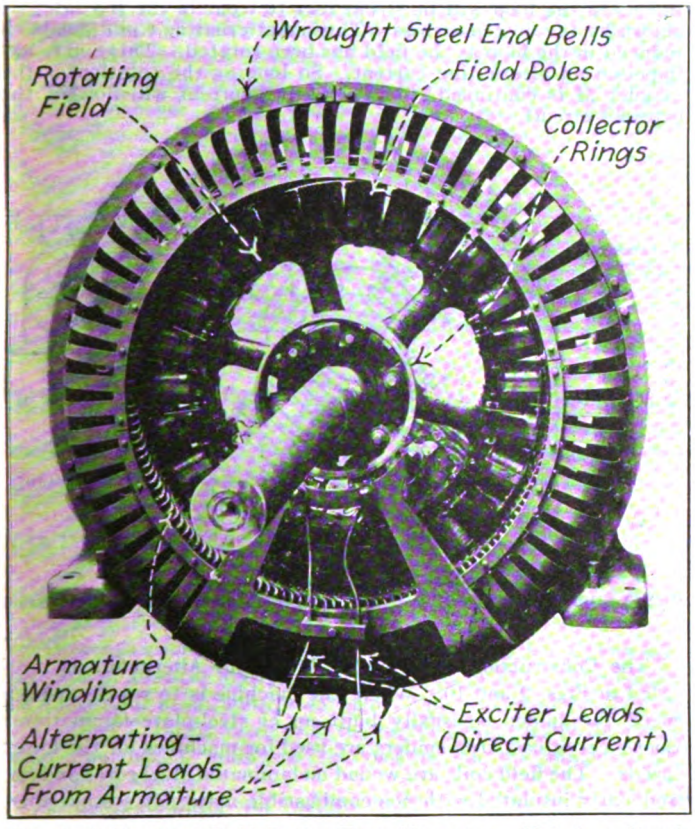

Fig. 6—A Revolving-Field Engine-Type Alternator. (This is a 26-pole Westinghouse Machine)

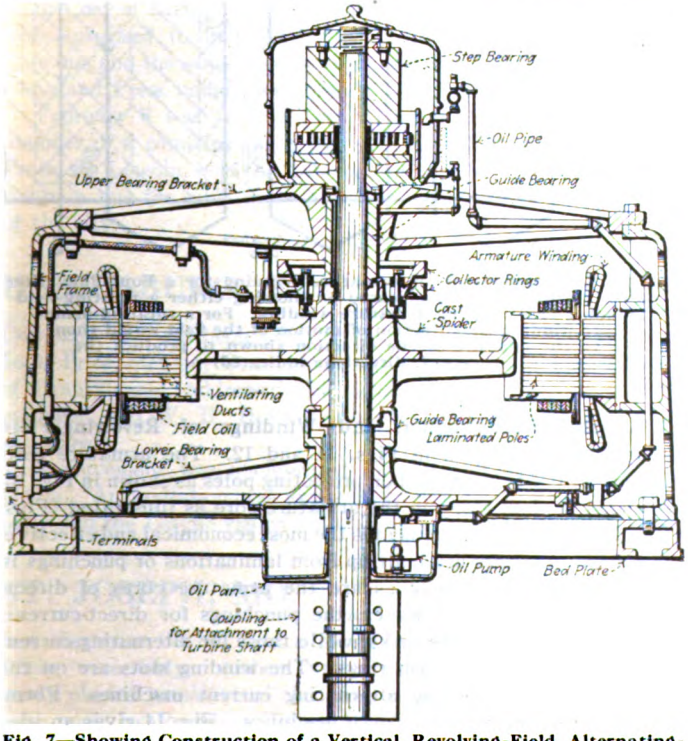

Fig. 7—Showing Construction of a Vertical, Revolving-Field, Alternating-Current Generator for Water Wheel Drive

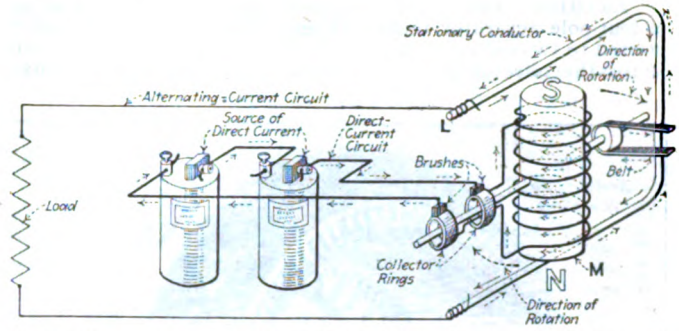

Fig. 8—Alternating e.m.f. Being Induced in a Stationary Conductor by a Rotating Field

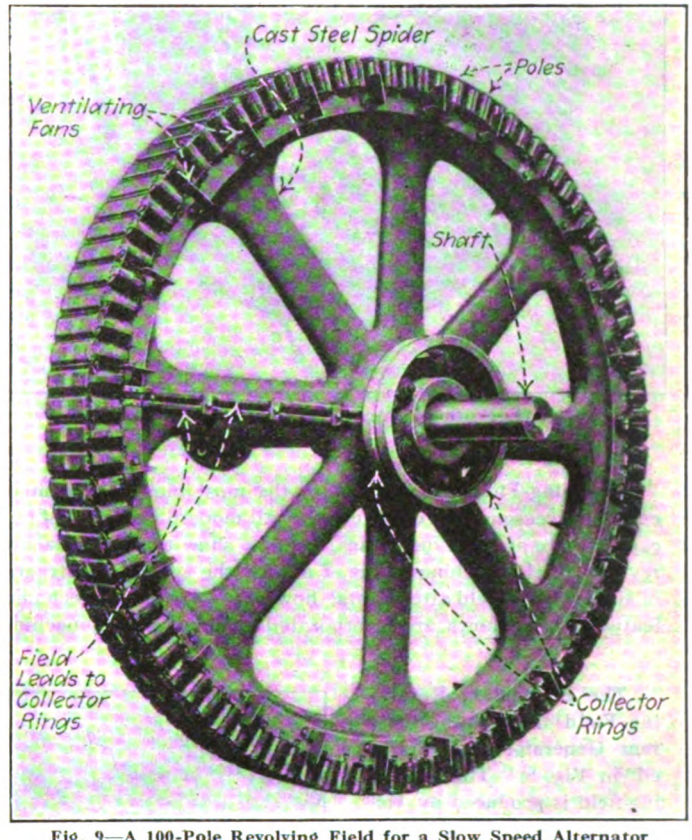

Fig. 9—A 100-Pole Revolving Field for a Slow Speed Alternator (Westinghouse Electric Company)

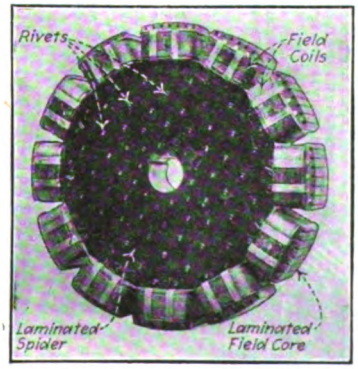

Fig. 10—A 12-Pole Revolving-Field Structure for a High-Speed Aiternator. (Westinghouse Electric Co.)

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EXAMPLE.—Fig. 3—*II* shows the revolving-armature winding of a four-pole generator tapped at four equidistant points and connected to two collector rings so as to impress an alternating e.m.f. across the collector rings. The brushes are, for simplicity, omitted.

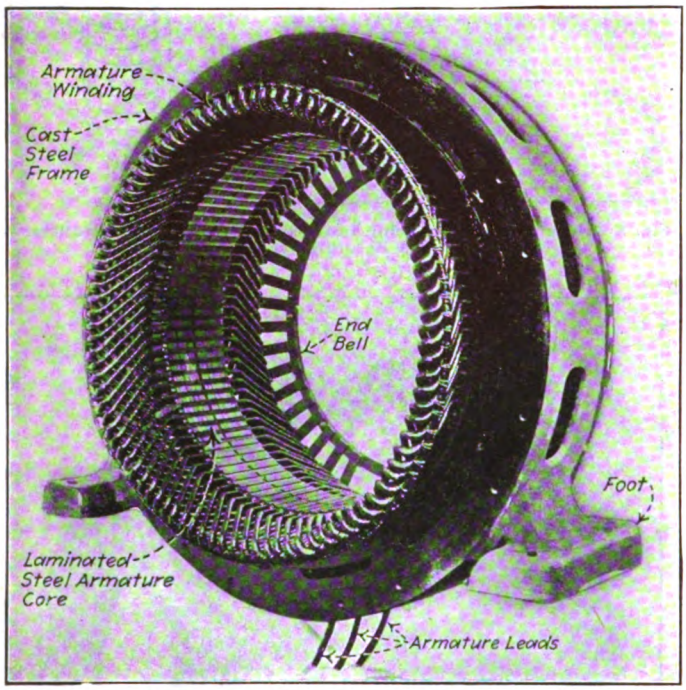

Fig. 11—Stationary Armature Structure for an Alternator

Revolving-Field Alternators are the most important commercially, for reasons above suggested. All modern machines of large capacity are of this type. Figs. 5 and 6 show typical horizontal, revolving-field machines. Fig. 7 details the general construction of all revolving-field alternators; however, some of the mechanical features there shown are incorporated only in vertical machines.

The Elementary Revolving-Field Alternating-Current Generator is diagramed in Fig. 8. The revolving-field is produced by the rotating electro-magnet *M* which is energized with direct current circulated by a couple of dry cells. The dry cells are equivalent to an *exciter*. The stationary conducting loop *L* is equivalent to a stationary armature winding. Note that this arrangement is similar to the elementary generator, except that, in that in the former illustration, the armature was rotated and the field was stationary.

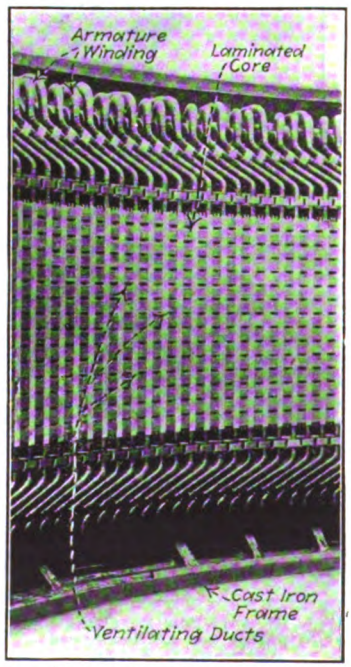

Fig. 12—Portion of the Armature Structure of a Revolving-Field Alternator. (Westinghouse Electric Co.)

EXPLANATION.—As the field *M* is rotated (clockwise) by the expenditure of work its flux cuts the stationary conductor *L*. At the instant pictured, the flux from the *S* pole is cutting the top side of the loop and that from the *N* pole the bottom side of the loop. An e.m.f. is being induced and a current will flow (from front to rear in the top side of the loop) in the direction shown by the full-line arrows. (Hand rule.) When *M* has been rotated a quarter revolution to a horizontal position, then at that instant, no flux will be cutting *L* and the e.m.f. induced in it will be zero. At the instant after *M* has been rotated another quarter revolution, its *S* pole flux will be cutting the bottom side of the loop and the *N* flux the top side. Now the e.m.f. and the current it impels in the loop will be (from rear to front in the top side) as shown by the dotted arrows. Thus an alternating e.m.f. has been induced in the loop as the field has been rotated. This e.m.f. has impelled an alternating current, So long as the rotation of the magnet *M* is continued, the alternating current will flow in the external circuit.

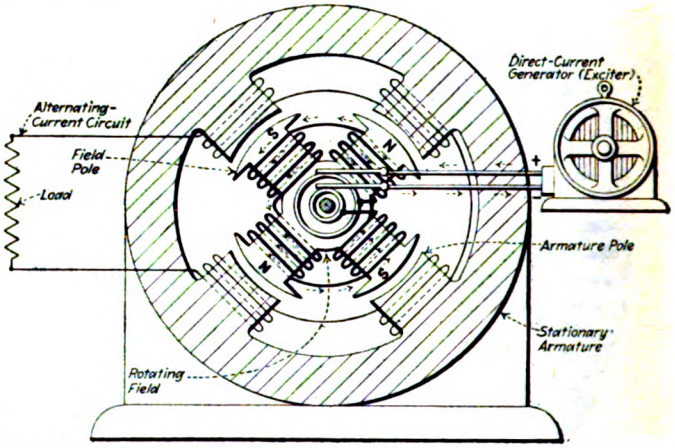

Fig. 13—Diagram of a Four-Pole Revolving-Field Generator (Single Phase)

The Construction of Revolving Fields for Alternators is indicated in Figs. 9 and 10. Where the machine is to rotate at high speed the spider is usually built up of steel-plate laminations. Cast steel or cast iron spiders are used for machines for the lower speeds. The field coils are wound on laminated steel cores and are frequently insulated with non-combustible materials so that they can be overloaded without damage.

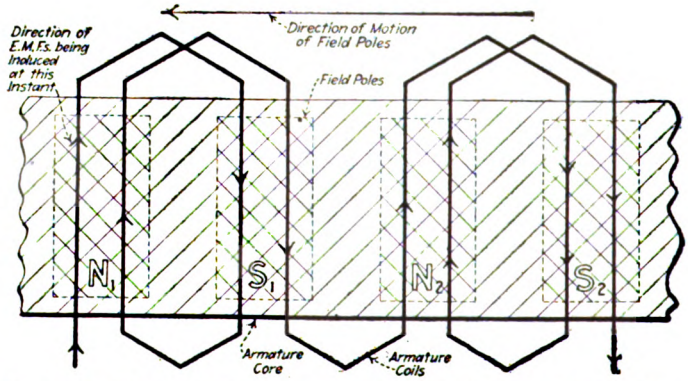

Fig. 14—Development of an Armature Winding for a Four-Pole Alternator. (This may be considered as showing either a rotating-field winding or a rotating armature winding. For a rotating-armature winding the direction of motion of the field would then be the opposite of the direction shown to produce the e.m.f. directions indicated)

Armature Construction and Windings of Revolving-Field Alternators are shown in Figs. 11 and 12. The armature coils are, instead of being wound on projecting poles as shown in Fig. 13, arranged in slots along in the armature core as illustrated (Figs. 11 and 12). This arrangement is the most economical and effective. The armature cores are built up from laminations or punchings in somewhat the same way as are the armature cores of direct-current generators. However, the punchings for direct-current, revolving armatures are disks, while those for alternating-current stationary armatures form rings. The winding slots are on the inside of the ring for the alternating current machines. Form-wound coils are used in modern machines. Fig. 14 gives an idea as to how the armature coils are arranged.

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NEWS OF JOVIAN LEAGUES

DALLAS On December 16 the Dallas League held its meeting for the first time at the Adolphus Hotel. H. R. Hancock delivered an illustrated address on the subject of "Music Re-creation." The inauguration of the new quarters was appropriately celebrated by making the event "Ladies Day."

An educational talk on "Storage Batteries" by G. L. Barrett, general manager of the Willard Storage Battery Company of Texas, was the feature of the meeting of February 5.

* * * *

COLUMBUS, OHIO An illustrated lecture with lantern slides and moving pictures on "An Epoch-Making Railway Electrification" was delivered before the Columbus League on the evening of February 9. J. J. Linebaugh was the speaker. He was assisted by E. S. Johnson.

* * * *

KANSAS CITY Capt. Ruby D. Garrett, Signal Corps, N. G. M., was the speaker at the meeting of the League February 2. His subject, "Kansas City's Signal Corps on the Border" was one of unusual local interest.

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CLEVELAND H. S. Quine, assistant to the president of the Goodyear Tire & Rubber Company, made an interesting address before the luncheon meeting at Cleveland, January 18. His subject was "Rubber."

How essential is play was explained by Dr. E. A. Peterson, director of medical and physical education in the Public Schools of Cleveland, in an address entitled "Play a Necessity," January 25. Allen T. Burns, director of the survey committee of the Cleveland Foundation, addressed the meeting on the subject, "The Need for a Survey."

J. Robert Crouse, Po. 260-8V, Past Jupiter Seven, presented the League with a splendid victrola and twenty-five records.

Visitors at the meeting: H. W. Alexander, Po. 17191, Statesman-at-Large, New York, and Ell C. Bennett, Po. 3932-13V, Mercury, St. Louis.

On February 1 the League had for its speaker Mr. John W. Raper, Mr. Josh Wise and Mr. Maxwell, whose subject was "The High Cost of Living." A number of the members of the League were surprised to find that Messrs. Raper, Wise and Maxwell were one and the same identity, who edits three departments in the Cleveland Press under those titles.

February 8 was Lincoln Day. Dr. G. C. Ashmun, a former member of a company of cavalry that served as a body-guard to President Lincoln, was the principal speaker of the occasion. Dr. Ashmun was for some years president of the Board of Education of the city.

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HARRISBURG, PA. The Harrisburg League was the guest of the Bell Telephone Company at a luncheon given at the Hotel Senate December 21. John Price Jackson, Commissioner of Labor and Industry, State of Pennsylvania, addressed the members. S. S. Eberts, district manager, and W. H. Howard, division publicity manager, were also guests.

A movement was inaugurated to visit and inspect industrial plants. An invitation was extended by the Bell Telephone Company and the League visited its building in a body.

* * * *

ST. JOSEPH, MO. The St. Joseph Jovian League held its first meeting under its new charter at the St. Francis Hotel on the evening of January 9. There were forty members present. H. C. Porter, Po. 3545, newly elected president of the League presided. Short addresses were made by President Porter, W. S. Blue and C. D. Fox, Po. 18163, First Tribune.

CINCINNATI Cincinnati Jovian League (Charter No. 1) held its first banquet at the Sinton Hotel on the evening of January 22. The newly elected officers of the League were present and presided. They are: Thomas Creaghead, Po. 3013, president; Thomas J. Ryan, Po. 6179, vice-president, and O. B. Marsh, Po. 17718, secretary and treasurer. The executive committee are: C. W. DeForest, Po. 14321, L. T. Milnor, Po. 1826, and Chas. McL. Beltzhoover, Po. 14310.

There were over one hundred members in attendance.

The banquet was opened by unfurling a beautiful American flag on a balcony. As the flag waved in the breeze of electric fans every one arose and sang the national anthem, "America." The banquet that followed was interspersed with the delightful singing of a quartet. At its conclusion the remainder of the evening was devoted to discussing the "Future of Jovianism."

* * * *

PITTSBURGH Motion pictures were shown at the luncheon meeting of the Pittsburgh League January 25, showing the apparatus and methods used in production of natural gas in the field, and its transportation to the city.

The meeting of the League February 8 was devoted to memorial talks on the life of Robert S. Orr, Po. 4634, who died January 24. Appropriate tributes were paid his memory by a number of his intimate friends.

* * * *

PORT ARTHUR-FORT WILLIAM Discussion of plans for the formation of a League to apply for a Jovian charter were indulged in by the members at the luncheon meeting at Port Arthur, Ont., January 15. Dr. C. C. McCullough addressed the meeting on "Electricity in its Relation to the Medical Profession." Other business transacted was the election of H. Monahan, Po. 13224, to succeed W. S. Jaffray, Po. 13215, as First Tribune. The resignation of the latter was filed and accepted by the League. Announcement was made that A. E. Wideman, Po. 18469, had been appointed chairman of the Utilities Commission of the City of Port Arthur.

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WINNIPEG, MAN. Thirty-eight members were in attendance at the meeting of the Jovian League held at the St. Charles Hotel January 24. The speaker for the occasion was R. C. Henders, president of the Manitoba Grain Growers' Association. He outlined the work his organization had accomplished during the past fourteen years. Letters expressing thanks to the League for Christmas presents, from Lieut. Smith and Capt. Hancock, were read.

* * * *

DENVER The luncheon meeting of January 17 was devoted to the election of officers. John F. Greenawalt, Po. 2308, Fifteenth Atlas, presided as chairman. Those elected were: President, A. F. Traver, Po. 2354; vice-president, B. S. Manuel, Po. 1699; secretary, R. Arnold Lewis, Po. 11514; directors, J. C. Davidson, Po. 1100, E. A. West, and George D. Luther, Po. 3472.

A. F. Traver, Po. 2354, presided at the meeting of January 31. George A. Loomis was the principal speaker, taking for his subject, "Colorado's Educational Code." At the conclusion of his address a vote was taken endorsing the "Educational Code Bill."

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NEW ORLEANS W. J. Aicklen, Jr., Po. 5666, presided at the luncheon meeting of the League, January 16, and was introduced as the new First Tribune for New Orleans. Wm. A. Porteous, Po. 9220, was introduced as Second Tribune. Plans for an era of building activity were discussed before the League. The principal speakers were: Frank E. Valentine, of St. Louis; Robley S. Stearnes, Po. 1501, Thirteenth Apollo, president, National Contractors' Association; and Second Tribune Wm. A. Porteous. C. S. Barnes, Po. 1492V, Fourteenth

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Apollo, made a short address endorsing the proposed electric show and other activities planned by the League.

At the meeting of January 24 plans were outlined for the League to co-operate with the electrical contractors of New Orleans in entertaining delegates to the national convention of that organization to be held in New Orleans. Joseph H. DeGrange, Po. 9192, president of the League, made the principal address.

A special committee was appointed to arrange for a big Rejuvenation and banquet to be held during the Mardi Gras season.

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ST. LOUIS Prof. Wm. F. Gephart, professor of economics, Washington University, addressed the St. Louis Jovian League January 16, on "Some Economic Aspects of the Hight Cost of Living." Prof. A. S. Langsdorf, dean of the Engineering School of Washington University, presided.

January 23, Alroy S. Phillips, State Senator and chairman of the Workmen's Compensation Committee, outlined a proposed "Workmen's Compensation Bill," in an address before the League. Fred B. Adam, Po 242V, presided as chairman of the meeting.

In accordance with a program to turn over some of the meetings of the year to different firms of the city, the Western Electric Company was given charge January 30. P. L. Thomson, Po. 4371, general advertising manager, Western Electric Company, of New York City, made an exceptionally interesting address on "Electrical Advertising." M. P. Linn, president of the St. Louis Advertising Club, presided.

By way of variety, Chairman E. H. Waddington, Po. 5176V, secured a speaker February 6, who in his boyhood was personally acquainted with President Lincoln. His address, made up principally of personal reminiscences of the martyred president, was exceptionally interesting.

J. Lionberger Davis, president of the Chamber of Commerce, was the speaker, and Henry W. Kiel, Po. 12312, Mayor of St. Louis, the chairman of the meeting of February 13. Announcement of their presence brought out the largest crowd of the year. Mr. Davis outlined some of the plans his organization was putting into effect for the betterment of the city, and made a plea to the League for their co-operation and assistance.

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CHICAGO "Mexico Up-To-Date" was the subject of an address delivered before the Chicago League, January 11, by Robert J. Kerr, who practiced law in Mexico City for sixteen years.

The regular noonday meeting of the League January 18 was omitted on account of the "Annual Beefsteak Dinner" to be held at 6 p. m. on that date.

Four hundred and seventy-five guests attended the dinner, which was held in the Louis XVI room, Hotel Sherman. The invitations to the dinner, extended to applicants for membership, brought ten candidates. The committee in charge received warm congratulations for its complete success. There were: Geo. C. Keech, Po. 19038, chairman; Frank E. Johnson, Po. 220, Howard Ehrlich, Po. 3213, N. F. Obright, Po. 18794, and Wm. E. Kelly, Po. 13143.

Capt. Edward H. Evers, commanding officer, Illinois Naval Battalion, addressed the meeting of the League January 25. His talk was illustrated with lantern slides showing his men in action.

The Chicago Traction Subway Commission's "Plan for Consolidating the Chicago Surface and Elevated Lines and the Proposed Subway," was the subject of an address to the League by Bion J. Arnold, February 1. An announcement was made of the death, January 23, of Arthur A. Thurlby, Po. 17581.

Horace J. Bridges, leader of the Chicago Ethical Society, addressed the League on "Democracy and Efficiency," February 8. His question, "Can Efficiency be Combined with Democracy?" is one that has been widely discussed recently.

Announcement was made that no meeting would be held on Washington's Birthday.

LOS ANGELES Geo. A. Lynch, general agent, California State Life Insurance Company, addressed the League, January 17, on "How to Say it! Does it Pay?" Wm. C. Kottemann, certified public accountant and professor of commerce, Southwestern University, spoke on "Better Business Stability." Frank Weiss, Po. 18087, presided as chairman.

The speakers at the luncheon meeting of January 24 were: Monroe Lathrop, of the Clune Film Producing Company, on "Movies vs. the Legitimate," and Judge Ray L. Cheseboro, police judge, "How to Move Through the City Without Getting Pinched." Leonard A. Hobbs, Po. 12727, was chairman of the meeting.

January 31, Albert W. Childs, Po. 17064, presided over the meeting. Thomas Burke Fletcher, editor, The Tribune, Marion, Ohio, was the speaker of the occasion, addressing the League on "Is California the Boob State?"

Frederick T. Woodman, Mayor of the City of Los Angeles, addressed the League February 7. His topic was "The Spirit of the Day." David C. Pence, Po. 2674, manager of the lamp department, Illinois Electric Company, was chairman.

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SAN FRANCISCO "Plans for Future Harbor Improvements" was the subject of an address made before the San Francisco League, January 17, by J. J. Dwyer, president of the Board of State Harbor Commissioners. The subject was one of general interest. In the poem of the "Poet Laureate" of the League, who tells why the subject is an important one, he concludes:

And now we're big and mighty,
And growing all the time;
The people come in train loads
From every place and clime.

Consequently everybody is interested in more and better facilities to get there.

"St. Joseph to Sacramento, Ninteen Hundred Miles on Horseback in Eight Days," was an interesting comparison of ancient and modern transportation, given by William Kieter, general agent, Wells Fargo Express Company, January 24. A. E. Drendell, presided as chairman.

Robert Robertson, proprietor of the Cape Ann Bakery of Oakland, entertained the League January 31, with rapid-fire Scotch stories. Captain H. F. Jackson, of the Sierra and San Francisco Power Company, and W. W. Briggs, of the Great Western Power Company, outline plans and purposes of the new geographic section of the National Electric Light Association, at the smoker given by the League February 15.

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TO CORRECT AN ERROR

Mr. Ell C. Bennett, Po. 3932-13V,
Editor The JOVIAN.
Dear Sir:

I wish to take this opportunity to correct the news item that appeared in the last issue of The JOVIAN with reference to the work W. E. Trittipo, Po. 6926, and myself are doing in this territory.

The item as printed stated that I had been placed in charge of the territory and that Mr. Trittipo was working under me. In as much as The JOVIAN reaches practically everybody in the electrical industry, and furthermore as Mr. Trittipo had already advised his customers in the South regarding the present arrangements, I would appreciate it if you would have the correction made in the next magazine, stating that Mr. Trittipo and myself have combined the southwestern and St. Louis territories into one territory which we are working on a partnership basis.

I will appreciate it if you will make this correction.

Yours very truly,
(Signed) Ivanhoe-Regent Works of General
Electric Company,
Per John O. Presbrey, Po. 5243.

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JOVIAN HOTELS

HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their **current membership cards** at the time of settlement. **Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage.** Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

	Minimum Without Bath	Minimum With Bath
Asheville, N. C.—Langren	.....	.....
Atlanta, Ga.—Winecoff	$1.50	$2.00
Atlantic City, N. J.—Isleworth	$1.50	$2.00
Baltimore, Md.—Emerson	$2.00	$2.50
Boise, Ida.—Idanha	$1.00	$1.50
Boston, Mass.—Brunswick	.....	.....
Charlotte, N. C.—Buford	$1.00	$1.50
Chattanooga, Tenn.—Theresa	.....	.....
Colorado Springs, Colo.—Acacia	.....	.....
Columbia, S. C.—Colonial	.....	.....
Dallas, Tex.—Oriental	$1.50	.....
Des Moines, Ia.—Kirkwood	.....	.....
Denver, Colo.—Albany	$1.00	$1.50
Detroit, Mich.—Hotel Tuller	.....	.....
Dixon, Ill.—Dixon Inn	$1.00	.....
Edmonton, Alta.—Alberta	.....	.....
Eau Claire, Wis.—Eau Claire	.....	.....
Ft. Wayne, Ind.—Wayne	$1.00	.....
Ft. Worth, Tex.—Metropolitan	.....	.....
Gary, Ind.—Gary	$1.00	$1.50
Grand Rapids, Mich.—Livingston	$1.00	.....
Harrisburg, Pa.—Columbus	.....	.....
Houston, Tex.—Bender	$2.00	.....
Hutchinson, Kan.—Chalmers	.....	.....
Idaho Falls, Ida.—Eleanore	$1.00	$2.00
Jackson, Miss.—Royal	.....	.....
Jacksonville, Fla.—Mason	.....	.....
Jacksonville, Ill.—Pacific	.....	.....
Kalispell, Mont.—Kalispell	$1.00	.....
Kansas City, Mo.—Coates	$1.00	$1.50
Kansas City, Mo.—Sexton	$1.00	$1.50
Lethbridge, Alta.—Alexandria	$1.00	.....
Los Angeles, Cal.—Clark	.....	.....
Los Angeles, Cal.—New Rosylyn	$1.00	$1.50
Louisville, Ky.—Galt	.....	.....
Madison, Wis.—Capital	$1.00	.....
Milwaukee, Wis.—Charlotte	$1.00	.....
Mitchell, S. D.—New Navin	.....	.....
Montgomery, Ala.—Exchange	.....	.....
Montreal, P. Q.—St. Lawrence	.....	.....
Montreal, P. Q.—Windsor	.....	.....
Muskegon, Mich.—Muskegon	$1.00	$1.50
New Orleans, La.—De Soto	$1.00	.....
New York, N. Y.—Breslin	.....	.....
Niagara Falls, N. Y.—Prospect	.....	.....
Norfolk, Va.—Southland	$1.00	$1.50
Oshkosh, Wis.—Tremont	.....	.....
Peoria, Ill.—Mecca	$1.00	.....
Philadelphia, Pa.—New Bingham	$1.50	$2.50
Pittsfield, Mass.—Wendell	$1.50	.....
Portland, Ore.—Multnomah	$1.50	.....
Portland, Ore.—Oregon	$1.00	$2.00
Richmond, Va.—Jefferson	$1.50	$2.50
Richmond, Va.—Richmond	$1.50	$2.50
Roanoke, Va.—Rockledge	$1.00	.....
Rochester, N. Y.—Powers	.....	$2.00
Rutland, Vt.—Berwick	.....	.....
St. Joseph, Mo.—St. Francis	.....	.....
St. Louis, Mo.—American	$1.50	.....
Salt Lake City, Utah—Newhouse	.....	.....
San Angelo, Tex.—Landon	.....	.....
San Diego, Cal.—San Diego	$1.00	.....
San Francisco, Cal.—Argonaut	$1.00	$2.00
San Francisco, Cal.—Sutter	$1.50	.....
Santa Barbara, Cal.—Potter	.....	.....
Schenectady, N. Y.—Mohawk	$1.00	$2.00
Seattle, Wash.—Seattle	$1.00	$2.00
Sheridan, Wyo.—Sheridan	.....	.....
Shreveport, La.—Youree	.....	.....
Sioux City, Ia.—Martin	$1.00	$2.00
Spokane, Wash.—Spokane	.....	.....
Springfield, Mo.—Colonial	.....	.....
Stockton, Cal.—Clark	.....	.....
Tacoma, Wash.—Olympus	.....	.....
Three Rivers, Mich.—Three Rivers	$2.00	.....
Tucson, Ariz.—Heidel	.....	.....
Vicksburg, Miss.—Carroll	$1.00	.....
Waco, Tex.—New State	$1.00	$2.00
Watertown, S. D.—Kampeska	$1.00	.....
Winnipeg, Man.—St. Regis	$1.50	.....
Winnipeg, Man.—Wellington	$1.00	$1.50
Winona, Minn.—Winona	.....	.....

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CONGRESSIONAL ACTION TO SET CLOCKS ONE HOUR AHEAD ADVOCATED

The committee on "Daylight Saving" at the United States Chamber of Commerce Convention held in Washington, January 31 to February 2, advocated congressional action to set all the clocks of the country ahead one hour of the present time.

The railroad committee urged action by the present session of Congress to prevent strikes and lockouts on interstate railroads. The committee on commerce urged that the Department of Commerce "find out what it costs to do business in the United States," for the purpose of ascertaining from the figures what percentage business concerns spend of their total incomes on items of deliveries, etc.

JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president s call. Secretary, W. N. Lockhert, Po. 14383, care N. O. T. & L. Co.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, C. O. Nichols, Po. 15537, care Benton Harbor & St. Joseph Railway & Light Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chariman, F. A. Coupel, Po. 584V, care Buffalo General Electric Co.

CHATTANOOGA—Wednesday, 12 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, L. C. Spake, Po. 15397, 1570 Old Colony building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, O. B. Marsh, Po. 17718, care Federal Sign System (Electric), 37 East Third street.

CLEVELAND—Regular meeting, Thursday, 12 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Ry. Power & Light Co.

DALLAS—Friday, 12:15 p. m. J. H. Moseley, Po. 11186, care Texas Power & Light Co.

DAYTON—First and third Mondays of each month, 12 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Co.

DENVER—Wednesday, 12:15 p. m., Kaiserdorf Hotel. Secretary, R. Arnold Lewis, Po. 11514, care Edins Lamp Works.

DETROIT—Saturday, 12:30 p. m., Grill room, Board of Commerce. Secretary, R. J. Kirchner, Po. 5199, care General Electric Co.

EAU CLAIRE, WIS.—First Monday each month. Secretary, Gurth Williams, Po. 18268.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Co.

GALVESTON—Meet on call. Secretary, Howard Jolly, Po. 16826, care Postal Tel. Co.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, George Cotton, Po. 10089, City Hall.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Co.

HUNTINGTON—Last Friday each month, Huntington Hotel. Secretary, H. A. Haddox, Po. 9164, 1116 Fourth avenue.

INDIANAPOLIS—Monday, 12:15 p. m. J. H. Albright, Po. 12484, care Indianapolis Light & Heat Co.

KANSAS CITY—Every other Friday, 12:15 p. m., Sexton Hotel, Secretary, L. E. Shoemaker, Po. 19190, 660 Gates building.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Co.

LOS ANGELES—Wednesday, 12 m., Jahnke's Tavern, 534 S. Spring St. Secretary, Clifton Peters, Po. 12734, 108 Edison building.

LOUISVILLE—Tuesday, 12:15 p. m., Watterson Hotel. Secretary, Paul Tafel, Po. 13337, 236 West Jefferson street.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel.

MILWAUKEE—Tuesday, 12 m., Maryland hotel.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second avenue and Seventh street. President, O. Curtis, Po. 11830, 301 South Seventh street.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Co.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne St., New Orleans, La.

NEW YORK—First Wednesday each month, 12:15 p. m., Browne's Chop House, 1424 Broadway. Secretary, H. E. Cleland, care Electrical World, 239 West Thirty-ninth street.

OKLAHOMA CITY—Monday, 12 p. m., Skirvin Hotel. Secretary, O. T. Jenkins, Po. 14273, care Nunn Electric Co.

PEORIA—First and third Saturdays of each month, 1 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Co.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon St.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, J. H. Van Aernam, Po. 14051, care General Electric Co.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's restaurant, Kellog street. Secretary, J. O. Roser, Po. 10412, care General Electric Co.

RICHMOND—Third Wednesday of each month, Business Men's Club. H. W. Hall, Po. 370, care Western Electric Co.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Co.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Co.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Ridpath, Po. 7739, 505 Rialto building.

SPOKANE—First and third Wednesdays of each month, 12 m., Davenport's hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Co.

ST. LOUIS—Tuesday, 12:15 p. m., American Annex. Secretary, Geo. McD. Johns, Po. 9052, Room 401 City Hall.

ST. PAUL—First and third Thursdays of each month, 12:10 p. m., Emporium Tea Rooms. Secretary, A. L. Frankenburger, Po. 5289, care Western Electric Co., 235 East Sixth street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Co.

WICHITA—First and third Mondays of each month, 12 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Co.

WINNIPEG—Every other Wednesday, 12:15 p. m., St. Regis Hotel. Secretary, W. H. Reynolds, Po. 4388V, care E. F. Phillips Electric Works, 602 Electric Railway Chambers.

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STATESMEN-AT-LARGE

ALEXANDER, H. W., Po. 17191, 29 West 39th St.....New York, N. Y.
BINFORD, JULIAN, Po. 1174V, care Westinghouse Lamp Co.....Atlanta, Ga.
BISCHOFF, W. E., Po. 3190, care W. N. Matthews & Bro.....Chicago, Ill.
CHAPPEL, H. C., Po. 5609, Box 352, Central Station.....Toledo, Ohio
CHASE, SAMUEL A. Po. 4424, care Westinghouse Elec & Mfg. Co...E. Pittsburgh, Pa.
COLKITT, J. N., Po. 2627, care John A. Roeblings Sons Co.....Los Angeles, Cal.
CROWFOOT, C. M., Po. 1182, care Crouse-Hinds Co.....Cincinnati, Ohio
CROW, GALEN, Po. 925V, care Public Service Co. of Oklahoma.....Guthrie, Okla.
DOWNS, B. M., Po. 2508, care Hemingray Glass Co.....Covington, Ky.
DUNHAM, A. W., Po. 7352, care Sun Ray Manufacturing Co.....Oshkosh, Wis.
FOSTER, F. C., Po. 3398, 823 Illuminating Building.....Cleveland, Ohio
GUARDIA, A. A., Po. 2657, 4447 Magnolia Ave.....Chicago, Ill.
HERSTEIN, W. R., Po. 765V, care Electric Supply Co.....Memphis, Tenn.
HILL, G. W., Po. 1271, 29 West 39th St.....New York, N. Y.
HICKOX, NORMAN B., Po 7881, care National X-Ray Reflector Co., 235 West Jackson Blvd.....Chicago, Ill.
JOHNSON, FRED, Po. 177V, 1110 Federal Reserve Bldg.....St. Louis, Mo.
LAUDERBACH, F. E., Po. 11655, 917 Pine St.....St. Louis, Mo.
MONTGOMERY, R., Po. 6147, care Louisville Gas & Electric Co.....Louisville, Ky.
RAMIER, J. F., Po. 10604, care Memphis Cons. Gas & Electric Co..Memphis, Tenn.
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville, Ky.
RIPLEY, L. O., Po. 7042, care Kansas Gas & Electric Co.....Wichita, Kan.
SERVA, A. A., Po. 425, 2420 Hoagland Ave.....Ft. Wayne, Ind.
VIOT, H. F., Po. 2156, 1810 Farnam St.....Omaha, Neb.
VOGAN, W. G., Po. 15974, care Northern Electric Co.....Winnipeg, Man.
VOGEL, J. C., Po. 2254-32V, 59th and Woodland Ave.....Philadelphia, Pa.
WADDINGTON, E. H., Po. 5176, care Western Electric Co.....St. Louis, Mo.
WAKEMAN, J. M., Po. 524, 29W 39th St.....New York, N. Y.

JOVIAN STATESMEN

ALABAMA
MATTHEWS, H. W., Po. 4476, care Burgoon-Matthews Electric Co.....Birmingham

ARKANSAS
COUCH, H. C., Po. 13893, care Arkansas Power Co.....Arkadelphia

CALIFORNIA
ORRICK, MURRAY S., Po. 5886, care Western Electric Co.....San Francisco

COLORADO
TRAVER, A. F., Po. 2354, care Denver Gas & Electric Co.....Denver

DELAWARE
FADER, W. L., Po. 2883, care Newark Garage & Electric Co.....Newark

GEORGIA
COLLIER, RAWSON, Po. 4458, care Georgia Railway & Power Co.....Atlanta

IDAHO
KIERSTED, EARNEST C., Po. 10258, care G. S. & T. F. Water Power Co...Twin Falls

ILLINOIS
CORBY, J. S., Po. 755V, care Bryan-Marsh Electric Works, General Electric Co.....Chicago

INDIANA
OBLINGER, R. P., Po. 4851, care Indianapolis Electric Supply Co.....Indianapolis

IOWA
DURBIN, B. H., Po. 10301, care Bryan-Marsh Works, General Electric Co.....Kansas City, Mo.

KENTUCKY
TAFEL, PAUL, Po. 13337, care H. C. Tafel Electric Co.....Louisville

LOUISIANA
CLEMENT, W. E., Po. 2557, care New Orleans Railway & Light Co.....New Orleans

MASSACHUSETTS
TROY, M. O., Po. 3271-37, care General Electric Co.....Schenectady, N. Y.

MICHIGAN
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Southwestern Electrical and Gas Association

Annual convention, Dallas, Texas, April 26-28. Secretary, H. S. Cooper, 405 Slaughter Building, Dallas, Texas.

Arkansas Association of Public Utility Operators

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THE JOVIAN

Volume Eleven APRIL, 1917 Number Five

THE FUTURE JOVIAN PLAN AS WE SEE IT

By Ell C. Bennett, Po. 3932-13, Mercury

WE HAVE known for many a day that the Jovian organization plan, the scheme of operation is not all that it should be. We have known that it did not answer many of the more vital problems that were—and still are—confronting our progress, and we are frank to say that up to a time not so long passed we were groping more or less blindly for the remedy.

We will take you even more intimately into our confidence and say we did not have a complete solution even so short a time ago as the last Annual Meeting, and—we KNEW we did not. For this, however, we can not severely castigate our mental vision, even though we be unsparing of self condemnation for, some eighteen thousand and odd other Jovian mentalities had also failed to produce a better plan than that under which we were operating.

In our effort to bring about changes that would at least ameliorate some existing conditions that were unsatisfactory, certain suggestions were laid before the last convention. These were not offered with any air-tight assurance that they were THE changes that should be made. On the contrary, they were made with the hope that they would stir up discussion that would breed a better way.

The discussion developed, and opposition, but the "better way" did not, and the suggestions were adopted. To our mind the basic reason for the failure of that opposition to carry its point can be nailed down to this fact,—it tried to tear down without having ready as an alternative a more clearly defined path out of the difficulties.

The Jovian Order can not be, and is not, different from every other human enterprise. It can approach perfection only through evolution. It is a long cry from the first incandescent lamp to that product of today. The best that any of us can do is little enough, and our salvation lies only in eternally sticking to it, profiting by experience and applying to the utmost of our ability the small measure of grey matter which has been passed to us in the general distribution.

In the steady elimination of methods that proved undesirable and ineffectual, and in forcing the growth of those that were meritorious, we had at the time of the last Annual Meeting established one, trememdously important fact. We had located our goal. We knew definitely and exactly what it was that the Order must accomplish to give it a right to exist. No small achievement that!

Out of the dark had come the sure knowledge that the great task of Jovianism, that by which it could secure maximum results for its members and industry was the earnest promotion of the local league plan.

We must organize a local league in every locality where one was at all feasible; we must stimulate and assist those leagues to engage in continuous, useful local activities; we must find and apply a system to standardize their methods and policies, and provide a vehicle through which they could participate in nation-wide development movements; we must devise a means of tying them in closely with each other, through the Jovian Central Office, at a cost commensurate with the service given by that office; we must satisfactorily provide for those Jovians who had joined the Order in good faith and were resident in towns of too small an electrical population to justify a local league.

Unremitting study of those questions coupled to a ready ear for the opinion of any Jovian sufficiently interested to express himself, began to clear away the fog, until some sixty days ago a solution came into being that, without having been thoroughly analyzed, weighed and tested from every possible angle, gives promise of containing at least a solid foundation upon which to build. It was first outlined in a series of addresses made by Mercury before Texas Leagues during February, and there met with unanimous approval.

It is this:

That The Jovian Order become in effect, if not in name, an "International Association of Jovian Leagues."

That the Jovian unit be a chartered Jovian local League, in place of an individual. (It may be necessary to make exceptions to this feature, in the case of isolated Jovians, Jovians who do not desire to belong to local Leagues, and Jovians in cities where, for one reason or another, Leagues should not be organized.)

Under this arrangement the Order would, with a few possible exceptions, operate in the same manner as other successful, long-established bodies whose chief functions must be performed through local chapters.

Eventually under this plan it is conceivable that there would be put one class of membership, *id est*, Jovian, which would indicate membership in a local Jovian League, chartered by and affiliated with The Jovian Order. When membership was taken in a local League the accepted candidate would automatically become a Jovian. He would pay but one annual dues assessment (payable quarterly, perhaps) and that to the local League. Such local League dues would include a per capita tax to be paid by the League to The Jovian Order, and which would be considerably less than the present Jovian dues, provided that certain other results can be obtained, as hereinafter outlined.

The local Leagues would participate, by accredited delegates or some other practical plan, in making the laws governing The Jovian Order, and in electing international, district and state officers. Each League would select its own local officers.

Briefly, therefore, the result would be:

The Jovian Order as a central clearing house, through which Jovian Leagues would be initiated and perpetuated in every possible locality, by delivering to the Leagues a useful service in fair ratio to the price asked. With this plan the combined force of all becomes the property of each, and the superior accomplishment of each the possession of all. Further, the final control of the parent body would rest in that body's components by and for whom it would exist.

The reduction of the per capita tax below the amount now paid by each Jovian to The Jovian Order, rests primarily with two possible changes:

First: Relieving The Jovian Order from the expense incident to certain services it now renders local chapters, which are not undertaken by any other "international association," grand lodge, or whatever the headquarters may be called.

Second: A very material increase in membership; which it is suggested may be brought about by the return to the active ranks of the Order of all those who have withdrawn, and the wholesale acceptance of all existing League members who are desirable and

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THE JOVIAN

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THE JOVIAN ORDER

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not now Jovians, without initiation fee, during a specified period of thirty or sixty days.

If we established at a certain figure the expense of the Central Office—in other words of The Jovian Order—which we can very easily do, and then divide that expense by, say, fifty thousand instead of ten, it is obvious that the per-head charge under the first figure will be very much less than under the latter. The only unsolved question here is the Jovian magazine, which would mean a material increase in expense parelleling increase in membership.

In speaking of eliminating certain services now performed by The Jovian Order and not given by other similar associations, we do not include any feature that is considered by the individual Jovian as an individual service to him. We would contemplate under the new arrangement an INCREASE in those things which the individual Jovian DOES consider as an individual service.

We would also include, as an expense of The Jovian Order, not less than two, high-class "Traveling Co-operators" for the assistance of local Leagues.

The doubt that we raised as to including in the League plan the isolated Jovian, can possibly be settled by affiliating him with the nearest local League on a "non-resident" charge, based on the per capita tax plus a merely nominal fee for the local chapter.

* *

There is certainly food for thought in what we have given you here. Will you please consider it as applied to YOUR locality and problem, and YOUR individual affiliation with Jovianism and let us have your opinion?

We know that you will realize that we are still, we might say, "thinking aloud." We want you to think with us; that is the reason this is being given to you in a measure only half-baked.

The frame-work looks good, though, doesn't it? Will you give this administration's officers all the encouragement you can in working out the final plan?

One very helpful act, a very essential duty upon the fulfilment of which the future work of the Order is entirely dependent, is to pay your current year's dues immediately, if you have not already done so.

Any change that is made in dues through a per capita tax arrangement can not possibly be brought about to apply before next year and no saving can be made by waiting; on the contrary, a very positive by-law, passed at the last Annual Meeting, will force the Central Office to drop all unpaid members within the next thirty days.

The splendid moral effect of a large number of present delinquent members paying their dues NOW, while these important matters are under consideration, will be of the greatest assistance in the expression of confidence it will convey.

* * * *

COMMISSION TO STUDY JOVIAN PROBLEMS

AT THE last Jovian Annual Convention a resolution was passed authorizing Jupiter to appoint a commission to meet at some central point for the purpose of devising ways and means to improve the existing relations between The Jovian Order and local electrical Leagues.

Reigning Jupiter Doherty, acting upon the suggestion of the convention, has appointed Mercury Ell C. Bennett, Po. 3932-13, as chairman of a commission organized for the purpose expressed, to meet at Cleveland on April 3.

The Cleveland Electric League proffered the use of their handsome club-rooms as a meeting place for the commission, and the offer was accepted.

The organization of the commission is now being prosecuted and it is assured that it will be composed of not less than seven men, each representing some one of the larger Jovian centers where a league is operating.

In addition to the members of the commission bringing to the meeting the thoughts of their respective communities, a call has

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been sent to every electrical League, and to every city having a large Jovian membership whether or not a League is in existence there, to either send a representative to confer with the commission, or to submit their views in writing.

It is hoped and believed that with the information and ideas that are concentrated in this manner for the benefit of the deliberations of the commission, that it will be able to offer a definite, practical, immediately-workable plan that will solve the major problems that are now preventing the best progress of the Order and local Leagues.

If the findings of the commission include changes that will require amendments to the existing Jovian constitution, and congress (which meets with the commission) agrees, a special meeting may be called at the earliest possible date, possibly in May, to enact the needed legislation. The constitution makes this possible upon thirty days' printed notice to all Jovians in good standing, provided a quorum (not less than two hundred) is present at the meeting at which the amendments are passed.

* * * *

PUT SOMETHING IN IF YOU WOULD TAKE SOMETHING OUT

IN ADDITION to the payment of dues there is something else required to make an organization one of which to be proud—one that it gives us pleasure to know and with which to acclaim our affiliation. In some organizations this "something else" may be dignity, in others exclusiveness, and in others the number of members, or the amount of wealth represented.

While dignity, the status of membership and other features are considered in the Leagues of The Jovian Order, they are merely observed as tenets to keep the organization at an elevation to command respect. The object of Jovianism is not to create an exclusive society. In fact its usefulness would be greatly impaired were such a policy attached to it. The limitations of class as defined in its rules are only for the purpose of building up a clean, wholesome, red-blooded membership from which can be generated a spirit of good-fellowship, democratic in its attributes and congenial in its intercourse.

The real purpose of The Jovian Order and its Leagues is usefulness. Service to its members, to the communities in which the Leagues are located and, ultimately, to the nation and humanity is its object. In other words, the ruling purpose of Jovianism is helpful and beneficial electrical achievement.

The plan is to cement the members of the industry into a harmonious unit, and then develop from this unit co-operative activity that will advance all branches of the electrical industry. World progress resulting from the development of electricity forms a powerful additional incentive.

The work of advancing the organization rests with the entire membership. It is the "something else" that is essential and must be contributed by each member individually.

The member who rests contented with the payment of dues, and who does not join with other members who are contributing effort to advance the organization, to make it greater and more effective, is not performing his portion of the service, "without which," to use the words of a great statesman, "there is no excellence." In plain, blunt United States language, he is not doing his duty.

He will want to participate in the glory, the success, when achieved. He will crave the right of calling attention to the fact that he is a member of the organization when it is accomplishing things, and yet, down in his heart he will know that his title to the joys that crown the finished job isn't exactly clear. He will then realize how hopeless is the pursuit of something for nothing.

On the other hand, if he has added his quota to complete the work, he will feel differently about it. There will be no fly in his ointment. He will not have to drop the tone of his voice when some active member comes around while he is speaking of HIS LEAGUE. He will have done his part and will know it.

That little feature of "doing your bit" in human affairs is the all-essential element that makes for contentment.

GEORGE L. GUY, Po. 4727, Fifteenth Cadmus, Winnipeg, Man. Who is among the leaders who have placed the Winnipeg League in the front rank of organizations in Canada

SIMPLE REQUIREMENTS EASILY MET TO SECURE A JOVIAN LEAGUE CHARTER. THE ADVANTAGES IN CHARTERING AND THE SERVICE RENDERED

THE FEBRUARY issue of The JOVIAN contained a comprehensive article, giving conclusive reasons why an electrical league should operate under Jovian a Charter.

In the following paragraphs are pointed out the ease with which a Charter can be obtained from The Jovian Order, and how the advantages in so doing more than justify a local league in adopting the simple steps that are necessary.

The Cost and Requirements of Chartered Operation.

There is no cost to a local league in applying for a charter and in operating under it. On the contrary, there is a financial benefit, in that the Order allows a chartered league a collection fee of fifty cents for each dues payment made through it.

The only requirements are:

First: The word "Jovian" must be included in the name of the League.

Second: The objects must not extend beyond those expressed in the Constitution of The Jovian Order, and in the "Model Constitution" submitted for the assistance of a league in framing its laws. This is for the express purpose of preventing local leagues from engaging in politics, religious controversies and any partisan activities.

Third: The qualifications for membership must parallel those of The Jovian Order. This is for the purpose of safe-guarding the identity of the local body as an electrical organization. Past history has proved that extensions beyond that field are disastrous in results.

Fourth: The local league must undertake the collection of Jovian dues of its Jovian members. A Jovian member makes one payment, which includes his Jovian dues; the latter must be forwarded to the Central Office by the local secretary. For this service

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the Order allows the local league a fee of fifty cents per individual collection.

In undertaking the collection of Jovian dues, a local league under no circumstances obligates itself for the payment to The Jovian Order of dues it does not collect.

Fifth: The membership can be drawn only from the district named in the charter, which, except under special conditions, is restricted to one city and its suburbs. Only one charter is granted to any one city.

Sixth: The local legaue is required to report to Jovian headquarters, on blanks furnished by the Order, details of its plans and activities. This is for the purpose of accumulating data for clearance to all leagues.

A Chartered League May Accept Non-Jovians as Members.

The "Model Constitution," furnished leagues on application, is not intended to be other than suggestive, and may be altered to suit the exigencies of local conditions confronting any league, excepting those clauses covering the above mentioned requirements. In those clauses the wording may be changed, if desired, if the re-arrangement does not destroy the meaning and intent as written therein.

The Service in Return.

The highest function of The Jovian Order is creative, suggestive and inspirational. It furnishes the ideas, the vehicle, the motive and the reward, which must be USED to be made USEFUL. Unemployed Jovianism is a high-powered, efficient motor-truck without a driver.

The Order does, however, return a *specific* service to both the individual and the chartered league.

The former includes, guiding and stimulating the local organizations of which the individual is a member, so that it returns a much greater benefit to him than it could possibly do without the Order's help. Minor direct services (to be augmented as opportunity offers) are: accident insurance at a reduced rate; the hotel discount plan; the Employment Bureau; the educational courses; the Jovian magazine; Goodfellowship Committee Charity Fund; participation in the Past Jupiters' Endowment Fund; the open door to the best potential friendships in the industry in more than seventy cities through the affiliating leagues.

The service to the League is a supervisory and clearing-house one. It means, that each League can with it reach a state of maximum usefulness to its members and industry, both locally and nationally, and cannot do so without it. It gives the League accurate knowledge of the plans, methods and experiences of a large number of similar organizations, and the prestige and power inspired by their combined influence and co-ordinated efforts.

Through standardized methods, and central concentration and diffusion of information, the Order operates as an almost perfect machine for the effective working and capitalization into DIRECT, LOCAL results of any movement that is promoted in an extensive manner, whether it be educational, sales promotion or any other form of development effort.

Some of the methods employed to deliver this service to the League include, in addition to the efforts of the Central Office resident staff, the use of traveling representatives at the call of leagues; and bi-weekly "Service Suggestion Bulletins," giving plans in detail for constructive, local work.

Not the least service performed by the Order is the constant organization of new leagues in localities where none previously existed. Every league added to the chain increases, just that much, the value of affiliation of those already in operation. The Jovian Order represents the only force equipped and competent to carry on this duty.

* *

All with a view to provide, for the great good of every unit of our profession, a powerful, concentrated, efficient, economic, centrally-directed instrument, representative of the entire electrical field and of every electrical community, for ready use in any endeavor that has as its object the constructive development of the electrical industry.

KANSAS CITY LEAGUE ALIVE AND ON THE JOB

BY BEING alert and watchful, P. Lloyd Lewis, Po. 6018V, president of Kansas City Chartered Jovian League, No. 2, and his able associates have again saved the electrical industry of that city from the enactment of legislation that would prove both costly and annoying.

There is an organization in Kansas City known as the "Kansas City Fire Agent's Association." Recently this organization filed an ordinance with the City Council prohibiting the SALE and USE of electric flat irons and electric curling irons that are not equipped with pilot lights.

The passage of the ordinance would mean the loss of thousands of dollars to the people who possess electric irons and curling irons. It would have meant months of inconvenience before irons meeting the specifications could have been procured. It would have meant an irreparable loss to the central station, to the jobbers and retail dealers of the city.

The originators of the measure made an erratic statement concerning the number of fires caused by the two appliances mentioned and were in a fair way to have the measure enacted when the members of the League asked for an investigation.

This they were able to obtain. Time was given them to procure statistics; for which they have applied to Jovian Central Offices, which it is felt practically certain will refute the assertions made that the appliances in general use are hazardous.

Service of this kind is valuable, demonstrating the existing need of The Jovian Order, and how it is guarding against legislative abuses.

* * * *

STARK COUNTY JOVIAN LEAGUE, CHARTER No. 7, STARTS CAMPAIGN FOR ONE HUNDRED AND FIFTY MEMBERS

SINCE effecting the organization which includes the cities of Canton, Massillon and Alliance, Ohio, the Stark County Jovian League has outlined and started a campaign to increase its membership to one hundred and fifty.

After making a careful canvass of the three towns it was decided that fully that number of electrical people were eligible and desirable as members.

Included in the plans of the members of the League, is one of holding a large Rejuvenation at which they plan to have Jupiter Henry L. Doherty, and Mercury Ell C. Bennett present.

First Tribune A. C. Acuff, Po. 10590, and Second Tribune R. E. Lane, Po. 8422, are organizing their forces for the "big drive." They will be actively assisted by the officers of the League.

* * * *

SPECIAL PRIZES GIVEN MILWAUKEE "ONE HUNDRED POINT COMMITTEE" BY MEMBERS OF THE LEAGUE

IN ORDER to urge the members of the Milwaukee "One Hundred Point Commitee" to put forth their best efforts in the recent contest, five members of the League each contributed a pair of gold cuff buttons to be offered as prizes.

The cuff buttons were offered by C. J. Klein, Po. 1589; R. M. Van Vleet, Po. 1094, Eighth and Ninth Mercury, state chairman of the committee; W. R. Patton, Po. 1090, Fourteenth Argus; Joseph W. Pfeifer, Po. 10981, and Carl Golin, Po. 12385, city chairman of the "One Hundred Point Committee."

The winners were Richard Fishback, Po. 18361, I. R. Douglass, Po. 18360, B. A. Bovee, Po. 16617, F. V. Ziekusch, Po. 16625, and E. H. Eckstein, Po. 15984.

The prizes were presented to the winners at the Rejuvenation held on the evening of March 16.

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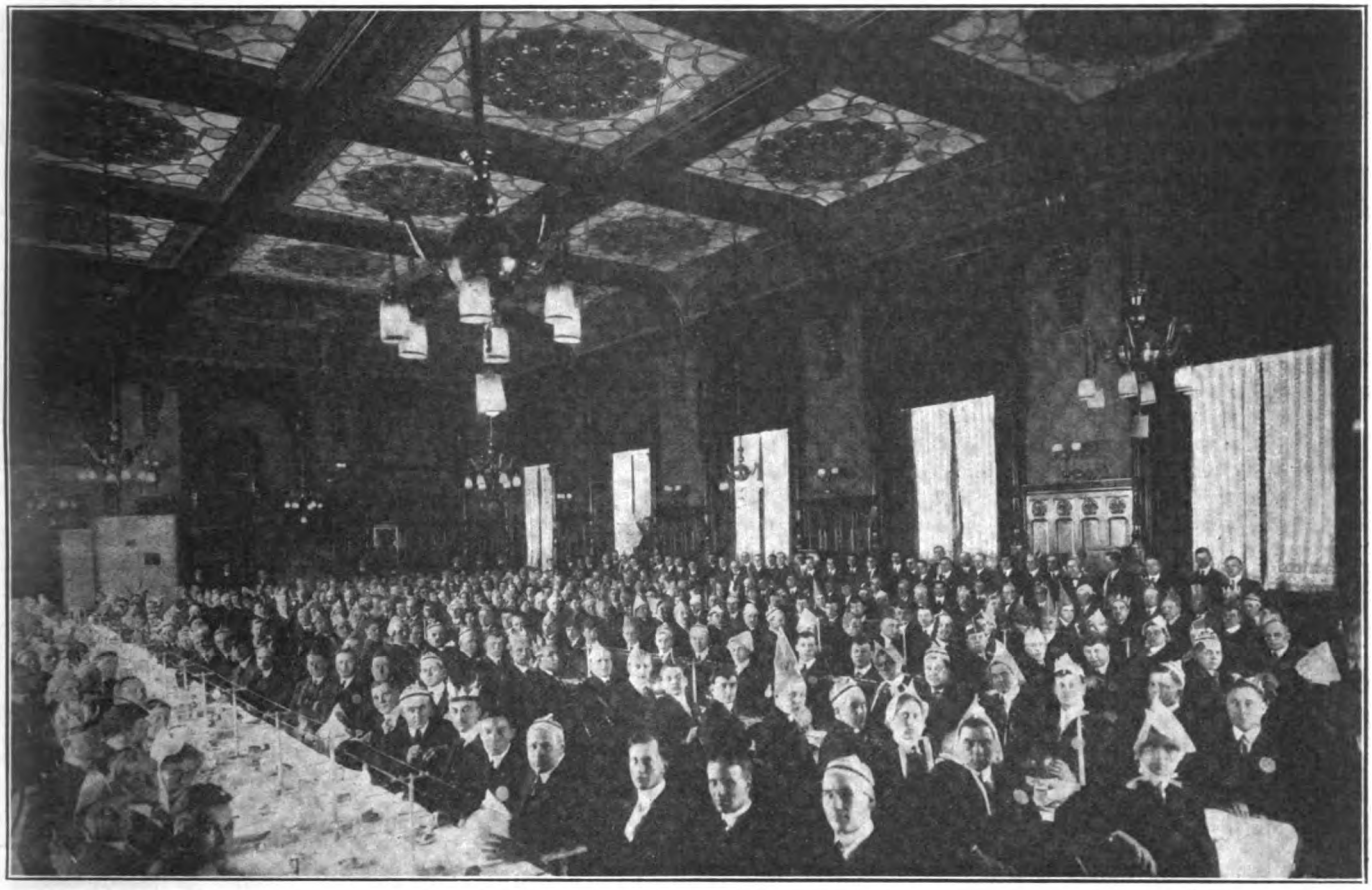
MINNEAPOLIS JOVIAN LEAGUE BANQUET



SOME PEOPLE are never satisfied, are they? Arrangements were made by the officers of the Minneapolis Jovian League, Charter No. 4, to accommodate 360 guests at their banquet held at the West Hotel on the evening of March 8. Over 400 members and visitors attended. One of the purposes of the banquet was to increase the membership of the League. Two hundred and twenty-five applications were received. Every member and guest present voted it the best affair ever held in Minneapolis by any electrical organization.

Were the officers of the League satisfied? No! Did they enjoy themselves? Oh, yes, immensely! In fact they admit they never had a better time. But they thought they ought to have had 400 applications for membership.

That's what we call being hard to please! But did you ever notice it is just these people who are hard to please who get what they want. They are going to hold another banquet in the very near future, and while we do not profess to be prophets, we are going to predict that they get the 400 new members.

Among the speakers at the banquest was J. E. Latta, Po. 12264, special agent, Underwriters' Laboratories, Chicago. In his address, entitled "Fire Waste," he described the laboratories maintained by the underwriters of Chicago, and some of the work they were doing.

W. I. Gray, Po. 8975, of Minneapolis, gave a description of the new electrical laboratories at the University of Minnesota.

O. Curtis, Po. 11830, First Tribune, outlined the plans of the League to keep in touch with the whole electrical industry of the city.

A splendid cabaret performance was given between the addresses, and the orchestra of the Minneapolis General Electric Company and the Jovian Glee Club furnished enjoyable features of the entertainment program.

PITTSBURGH LEAGUE "LADIES' NIGHT"

SATURDAY evening, March 17, was ladies' night at the banquet, entertainment and dance held by the Jovian League of Pittsburgh. The function took place at the German Club. To W. L. DeCoursey, Po. 7700, president of the Pittsburgh League, goes the credit as the originator of the scheme to have the ladies present. To the ladies of the "ladies committee," the personnel of which appears in the League news section of the magazine, is due the lion's share of the credit for making the affair the delightful one it proved to be.

This committee, who were joined in their efforts by their husbands and the officers of the League and their ladies, officiated as the reception committee.

The club rooms were especially decorated in green, in keeping with the day, and arranged in harmony with the permanent decorations.

Entering the dining room the guests, numbering about fifty couples, sat down to a chicken dinner, during which they were entertained by professional singers.

Song books were distributed at each plate to encourage the guests to join in the songs. Carnations were distributed to the ladies and Charley Chaplin hats to the gentlemen.

After coffee was served, H. B. Kirkland, Po. 285-5, Past Jupiter Five, presiding as toastmaster, introduced Statesman C. L. Pierce, Po. 3252, Arthur G. Pierce, Po. 2896; First Tribune, Ludwig Hommel, Po. 4336, President W. L. DeCoursey, Po. 7700, and several others for impromptu talks.

Following the dinner, dancing was participated in, with vaudeville acts interspersed between the numbers. The amusement continued until interrupted by the big clock in the lobby registering twelve. The guests happily discovered it was eleven minutes fast and indulged in "one more" extra dance before departing.

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TEXAS TAKES HOLD ANEW

A wonderful state is Texas, populated by men who are absolutely irresistible in their ability to "do," when once they set their hearts upon the realization of a desire. A state in which a personality rich in those things which constitute a REAL MAN can accomplish almost any task. A place in which artificiality, hypocrisy and skin-deep good-fellowship will get one about as far as would travel the proverbial snow-ball in flame-lit Hades.—EDITOR.

THROUGH the initiative of a number of Dallas Jovians captained by R. S. Wakefield, Po. 2606, First Tribune, a tour of seven cities of the Lone Star state was undertaken during the latter part of February by a little band of Jovian boosters, self-styled "The Wrecking Crew." The significance of that title embodied the "wrecking" of the spirit of indifference to Jovian progress that had been noticeable in some Texas cities, and its replacement by the ambition to live up to the late development of, and possibilities in, the grand Order born and bred in the southwestern empire.

The "crew" consisted of Tribune Wakefield, Walter J. Drury, Po. 7677, M. F. Sterett, Po. 93, Ninth Hercules; Charles L. Martin, Po. 176, Eleventh Vulcan, and Mercury Ell C. Bennett, Po. 3932-13. These spell-binders made the entire circuit, with their forces augmented for certain portions of the route by numerous other leading Texas Jovians, including Harry E. Hobson, Po. 56, Tenth Neptune; J. E. Couch, Po. 214, J. G. Barrett, Po. 3189, W. B. Clayton, Po. 7524, W. G. Schmauder, Po. 8768, all of Dallas; Lee H. Johnson, Po. 1016, Past Jupiter; Charles A. Newning, Po. 2, H. M. Newning, Po. 16304, A. J. Binz, Po. 1921, Thirteenth Neptune, of Houston.

Dallas League Meeting

The first gun was fired at a splendid gathering of Dallas Jovians and other electrical men, at the regular meeting of the Dallas Electric Club-Jovian League, noonday luncheon, Hotel Adolphus, February 19.

Charles W. Hobson, Po. 1, Past Jupiter One, presided, introduced as chairman by Vice-President R. S. Wakefield, in the absence of President H. C. Bramley, Po. 12077.

Chairman Hobson introduced Mercury Bennett who spoke for an hour outlining—to quote from the account appearing in the March issue of the Southwestern Electrician—"the origin of the Order, its progress and development, as well as what must be done in the future if the Order is to fulfill its mission to the men of the electrical industry.

". . . . without buncombe or self gratulation or flattery to those who were instrumental in launching the Order nearly a generation ago he laid his cards face up on the table and called a spade a spade . . . ."

Following Mercury Bennett's speech, a motion was carried to appoint a committee to consider the suggestions for Dallas contained in Mercury's address, and to adopt them if they proved worthy. This committee was forthwith appointed, with instructions to act without delay. The committee:

H. S. Cooper, Po. 365, Chairman; C. W. Hobson, Po. 1, W. J. Drury, Po. 7677, Joseph E. Farnsworth, Po. 28, E. T. Moore, Po. 1023, Frederick R. Slater, Po. 10685, E. M. Powell, L. A. Ott, R. S. Wakefield, Po. 2606, C. W. Davis, Po. 58, M. F. Sterett, Po. 93, and Mr. Griffitts.

The JOVIAN has been advised that the committee is making good progress, and a completed account of their findings can probably be given in the next issue.

Ft. Worth to the Front

A representative gathering of Ft. Worth Jovians assembled for dinner on the evening of February 19, followed by informal talks by members of the "crew" and Ft. Worth men, introduced by J. C. Gantt, Po. 6143, officiating as toastmaster.

The result of this discussion, of ways and means to make Jovianism a useful vehicle in that city, was the appointment of a committee, similar to that named in Dallas, and with like instructions. The personnel of that body follow

J. C. Gantt, Po. 6143, Charles J. Miller, Po. 6146, H. S. Ashley, L. E. Blanpied, Po. 17859, E. A. Shotts, Po. 7695, Burnie R. Blair, Po. 7692, V. W. Berry, Po. 1006, H. G. Brickhouse, W. C. Forbes, Po. 1323.

Waco Awakes

The reception of the "wreckers," on the twentieth at Waco, was an evening dinner and informal discussion, as it had been at Ft. Worth, with the net result that immediate action was decided upon to once more make Jovianism a factor in the Waco electrical industry.

The men, whose names immediately follow here, were picked as a committee to lay out and put into effect a vigorous campaign, and to those who are familiar with the ability they represent, there can be no question that Waco will shortly take its rightful place in the forefront of Texas Jovianism; F. L. Booth, Po. 12076, chairman; E. F. Copley, Po. 7073, E. E. Edmonds, Po. 8182, J. J. Owen, Po. 4984, M. E. Rawls, Po. 7080, and E. C. Blomeyer, Po. 8542.

Austin Asks for Action

At Austin, on the twenty-first, the boomers were further encouraged by the success of a noonday meeting, to which the presence of Joseph E. Farnsworth, Po. 28, of Dallas, contributed in large measure.

The assembled Jovians and other electrical men were a unit in believing that a worth-while Jovian League could be organized and operated in the capitol of Texas, and appointed as a committee to bring about quick action along the development of such a body the following gentlemen: Prof. J. M. Bryant, W. L. Eyres, A. E. Hancock, Po. 6634, W. J. Jones, J. W. Ezelle, Po. 10514.

San Antonio's Splendid Support

S. V. Patrick, Po. 1933, H. G. Wharton, Po. 6653 and a number of other of the old stand-bys, had been hard at work organizing a big rally for the evening of February 21 in San Antonio. Their efforts were rewarded with a turn-out which was said to be the largest gathering of electrical men that had ever graced this fair city.

Prior to the evening meeting a caucus of San Antonio Jovians had been effected, with the idea of presenting to the bigger gathering definite suggestions for a re-organized local League. The result of this effort is worthy of the highest praise for it secured the consent of William B. Tuttle, the active head of the San Antonio Gas & Electric Company to serve as president; Martin Wright, president of Martin Wright Electric Company, as vice-president, and Sid V. Patrick, of the Southwest General Electric Company, as First Tribune.

The announcement of these selections at the evening meeting brought forth applause that demonstrated their popularity.

The new officers will immediately lay plans to complete the League organization, and to make of it a truly effective instrument for the development of San Antonio's electrical and industrial future.

At the close of the meeting H. G. Wharton, who has faithfully served the Order as Tribune for several years, announced that he desired that all present would give him the happiness of considering him as host for the occasion. The offer served, to those who have the honor of knowing Harry Wharton intimately, to reflect the sincere, generous and entirely lovable personality of the man. If those characteristics met the reward in this commercial world of ours that they justly deserve, Wharton would never lack for all those things that men covet.

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Galveston Gets Going

From San Antonio the belligerent band journeyed to Galveston where, on the evening of the twenty-second, they met for an oyster feast in the evening at "Rogers," the pick of Galveston's progressive electrical industry.

After the feast came the oral fireworks, participated in by a majority of all those present. When the smoke had cleared away it was found that there remained a well-defined desire to bring the Galveston Jovian League into greater activity, and the determination to realize that wish. As a means, a committee was appointed including as members: W. R. Phipps, Po. 10676, chairman; Max Levy, Po. 10652, W. D. Masterson, Po. 10661, K. E. Mason, Po. 10659, L. M. Kelsey, Po. 11350, and H. Jolly, Po. 16836.

Houston Goes Into "High"

On Friday the twenty-third the "crew" donned its best bibs and tuckers for the final effort in Houston. Perhaps the best that can be said of the result there, could be no better expressed than in the language of the news-gatherer of the Southwestern Electrician, who was present with skilful pen. He reports as follows in the March issue:

"On Friday the twenty-third there was a splendid meeting at the big City Auditorium of Houston, from the rostrum of which Mercury Bennett delivered his address to the best electrical gathering which has ever assembled in the city.

"Previous to this the visitors had been entertained at dinner at the Rice Hotel by those who had been instrumental in working up the local interest. At this dinner fine addresses created enthusiastic interest in the plans on foot.

"David Daly, Po. 366, presided over both the dinner and the subsequent meeting at the auditorium. At the latter meeting a committee was named to take up the work of Jovianism in Houston. This committee will immediately start work to perfect plans toward that end."

The committee: Arthur J. Binz, Po. 1921; R. S. Bertron, G. H. Froebel, Po. 14466, Clarence R. George, Po. 368, J. Z. George, Po. 2843, F. B. Hathaway, Po. 4980, D. A. Hegarty, Po. 9208, H. P. Hess, Po. 4981, H. F. MacGregor, Po. 21, C. A. Newning, Po. 2, D. F. Woods, Po. 181.

And so the "wrecking crew," with a one hundred per cent performance to their credit, must feel that any personal sacrifices they made to cover the circuit are amply justified by the results.

* * * *

Cheer up. If you intend to be happy don't be foolish enough to wait for a just cause.

PROHIBITION

Words and Deeds of Jean Baptiste Trudeau, fully and faithfully reported for The JOVIAN, by George C. Rough, Po. 512, Past Twelfth Hercules.

I UN'ERSTAN' dat Laurier is pass out de word, "No more trit affer 1 er May." By Gar: Am not glad for dat me, 'cos w'en am go on Montreal for buy de material, dat fren' of me on de Generous Electrique Compagnie can't say no more "Com' an' 'ave leetle drink." Affer dis, w'en all de boy is feel lak' mak' de socialibilite an' pass on de bar, he spik polite wit' de bartender an' den ax hese'f "W'at I'm 'ave?" an' den he pay de cashier an' not mak' no delay wit' de long conversation.

De brass foot res' don' feel comfortable no more. No Sir.

Of'cors' we lucky dont 'ave—w'at dey 'ave on de State—dat "Bone Dry" bizness. Am feel ver' sorry me for all dem feller on Washington, can get only grape juice. Am fin' out dere is not much de courage on grape juice, but, mebbe dey dont need no courage on Washington.

Ontario 'ave w'at dey call "Prohibition" an' no bar a'tall, an' know nuttings 'bout dat "Bone Dry" proposition—YET. Mos' de gang up dere is write de letter, or mak' de telegram to Montreal, "Please sen' my house one case Scotch," an', sure 'nuf, it come queek over de wire sam' day, jus' lak' push de button, an' he put heem in de coal cellar. De coal is so scarce dis winter dere is plenty room for spare, an' he mus' 'ave *somet'ing* for kip heem warm. Also, w'en he get lon'som' an' commence for worry 'bout w'ere he is goin' get de nex' potato, he jus' go down de celler an' 'ave t'ree four drink, mebbe six.

On Toronto, de're so lon'som' wit' no bar dat som' de feller is put de green door, wit' leetle glass window, on de coal cellar, an' w'en hees fren' com' pay heem visit, right off he's axin' heem, "Com' an' see my coal."

On Manitoba is jus' de sam' t'ing, only dey dont tell w'ere she is hide.

De law say—Get drunk on your own plas'—Kip it to you'se'f—Dont tell nobody—O. K. No fine—nobody say nuttings. Get drunk 'nudder plas'—goodbye for t'ree mont.' De feller w'at got plenty monee, he can get de jag 'fore breakfas', 'nudder one for lunch, an' all lights on—w'at you call "lit up"—'fore going' 'sleep; but de poor man w'at cant press de button, he got cheat or stay in de dark.

Dat whiskey bizness is bad bizness.

Lak' ma ol' fren', Shakespeare, use' say, "Call de onion by de nam' "Skunk"—dont matter."

JOVIANS LOOK!

THE Jovian Constitution provides that a ballot be published here on which each Jovian may indicate his preference as to any individual for any elective office. The ballots are to be handed to the Nominating Committee for their information and guidance. Fill it out and mail to

THE JOVIAN ORDER

SYNDICATE TRUST BLDG. ST. LOUIS

THE JOVIAN ORDER
SYNDICATE TRUST BLDG.,
ST. LOUIS

My preference for (state name of office)

.....

for the next administration is.....

.....Po.....

(Sign here)

.....Po.....

City..... State.....

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CHARTERED
JOVIAN LEAGUES

Cincinnati	Charter No.	1
Kansas City, Missouri	" No.	2
Pittsburgh	" No.	3
Minneapolis	" No.	4
St. Joseph, Missouri	" No.	5
Louisville, Kentucky,	" No.	6
Stark County Jovian League Comprising the towns of Massillon, Canton and Alliance, Ohio.	" No.	7
Tulsa, Okla.	" No.	8
Eau Claire, Wis.	" No.	9
Harrisburg, Pa.	" No.	10
Wichita, Kan.	" No.	11
Winnipeg, Man.	" No.	12
Bay City, Mich.	" No.	13
Milwaukee, Wis.	" No.	14
Port Arthur, AND Fort William, Ont.	" No.	15
Oklahoma City	" No.	16

More Are Coming!!!

Coming Conventions

Tri-State Water and Light Association of the Carolinas and Georgia

Annual convention, Macon, Ga., April 17-19. Secretary, W. F. Steiglitz, Columbia, S. C.

Southwestern Electrical and Gas Association

Annual convention, Dallas, Tex., April 26-28. Secretary, H. S. Cooper, 405 Slaughter Building, Dallas, Texas.

National Fire Protection Association

Annual meeting, Washington, D. C., May 8-10. Secretary-treasurer, Franklin H. Wentworth, 87 Milk Street, Boston, Mass.

Arkansas Association of Public Utility Operators

Annual convention, Pine Bluff, May 16-18. Secretary-treasurer, R. B. Fowles, Pine Bluff Company, Pine Bluff, Ark.

Missouri Association of Public Utilities

Annual convention, aboard Steamer Quincy, en route from St. Louis, May 17-19. Secretary, F. D. Beardslee, 315 North Twelfth Street, St. Louis, Mo.

Electrical Supply Jobbers' Association

Semi-annual meeting, Homestead Hotel, Hot Springs, Va., May 22-24. Secretary, Franklin Overbaugh, 411 South Carolina Street, Chicago, Ill.

National Electric Light Association, Iowa Section

Annual convention, Des Moines, Iowa, May 24-25. Secretary, L. E. Caldwell, Iowa City, Iowa.

National Electric Light Association

Annual convention, Atlantic City, N. J., May 29-June 1. Secretary, T. C. Martin, 29 West Thirty-Ninth Street, New York City.

American Institute of Electrical Engineers

Annual convention, Hot Springs, Va., June 26-29. Secretary F. L. Hutchinson, 33 West Thirty-Ninth Street, New York City

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PERSONAL POINTERS

Along the way of life's affairs,
We note the gladness and the cares;
A friend's misfortune brings distress,
We share his joy—his happiness.
'Tis hoped the items that appear
Will be the news you wish to hear
About YOUR friend and you may say,
"I always knew he'd win some day!"

* * * *

S. H. STOVER, Po. 4832, of Pittsburgh, Pa., whose line is electric supplies, has recently moved his offices from 518 Empire Building to 705 May Building.

* * * *

HENRY D. SEARS, Po. 2944, general sales agent, Weber Electric Company, Boston, Mass., removed his offices, March 1, from 131 State Street to 80 Bolston Street.

* * * *

W. J. ROSE, Po. 10595, general manager of the Alliance (Ohio) Gas & Power Company, has been elected president of the Alliance Rotary Club which was recently formed.

* * * *

H. M. KOHN, Po. 18503, has resigned his position as commercial manager of the Birmingham (Ala.) Railway, Light & Power Company and will engage in business for himself in Birmingham.

* * * *

CHARLES FELKER, Po. 116, who has been traveling salesman for the Central Electric Company, Rockford, Ill., for the past fifteen years, was recently made manager of sales by that company.

* * * *

C. H. TALMAGE, Po. 1431, formerly sales manager for the Western Electric Company at Kansas City, Mo., has been appointed manager of the Salt Lake City branch of that company.

* * * *

H. C. BROWN, Po. 8808, assistant secretary of the National Electrical Contractors' Association, has been appointed secretary of the organization. He succeeds George H. Duffield, Po. 4209, resigned.

* * * *

J. B. CRAWFORD, Po. 4496, First Tribune, Kenosha, Wis., has resigned his position with the Wisconsin Gas & Electric Company at that point and is now with the Central Illinois Utilities Company, Paxton, Ill.

* * * *

W. PORTER JONES, Po. 19426, formerly new business manager for the Oklahoma Gas & Electric Company at Oklahoma City, has been appointed general manager of that company's plant at Norman, Okla.

* * * *

IRVIN J. SHULSINGER, Po. 15762, formerly with the Electric Company of Missouri, at Webster Groves, Mo., is now connected with the advertising department of the Western Electric Company at New York City.

* * * *

A. E. WARD, Po. 11785, has been transferred to the Lebanon (Pa.) division of the Reading Transit & Light Company and made general manager. He was formerly connected with the Reading branch of the company.

* * * *

GEORGE B. VASEN, Po. 8945, who has been engaged in the retail and electrical contracting business at Quincy, Ill., is now engaged in the wholesale business. He has disposed of his retail and contracting departments.

P. B. ZIMMERMAN, Po. 7305V, Cleveland, Ohio. Although "Zim" does not rank in stature with some of his fellow Jovians, he stands well over six feet in Jovian achievement. His activities in connection with the work of the "One Hundred Point Committee" helped materially to boost Cleveland into first place in her class and won the decoration of "V" to prefix to his potential

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W. PORTER JONES, Po. 19426, has been appointed manager of the Norman (Okla.) plant of the Oklahoma Gas & Electric Company. He was formerly new business manager for the company at Oklahoma City.

* * * *

DONALD MCDONALD, Po. 13317, manager of the Louisville Gas & Electric Company, was appointed auditor of the Louisville Industrial Foundation at a recent annual meeting of the stockholders of that organization.

* * * *

C. W. Jones, Po. 3776, who has been secretary of the Trumbull Electric & Manufacturing Company of Plainsville, Conn., for a number of years, resigned February 1. The JOVIAN has not been advised of his plans for the future.

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W. F. SCHARENBURG, Po. 17168, has been made manager of the recently acquired branch of Avery & Loeb Electrical Company at Columbus, Ohio. The branch was secured through the purchase of the Columbus Chandelier Company.

* * * *

J. BRUCE STUART, Po. 6409, who was division representative for the Public Service Electric Company, of New Jersey, has been transferred to the general office of that company and made assistant to the general power representative.

* * * *

M. B. WHEELER, Po. 3093, who was formerly with the Tel Electric Company at Houston, Texas, was appointed commercial agent, March 1, for the American Public Utilities Company. His headquarters will be Grand Rapids, Mich.

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D. H. BRAYMER, Po. 4450, formerly electrical engineering editor of the Electrical World, recently resigned to become editor of the Electrical Record. Prior to going with the Electrical World, Jovian Braymer was editor of Electrical Engineering.

* * * *

B. T. GIFFORD, Po. 6544, who until recently was chief engineer of the American Public Utilities Company, Grand Rapids, Mich., has resigned his position with that company and opened offices as consulting engineer in the Grand Rapids Savings Bank Building.

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A. A. GUARDIA, Po. 2657, Statesman-at-Large. Jovian Guardia is carrying the message of Jovianism to every part of the United States and into Canada

ROBERT L. JAYNES, Po. 1421-50, Past Jupiter Ten, is one of the incorporators of a new firm known as the Jaynes Seed & Live Stock Company, Massaponax, Va. The company will engage in scientific farming on 710 acres of land located six miles south of Fredericksburg, Va.

* * * *

GRAYSON JONES, Po. 13782, Second Tribune, Nashville, Tenn., has resigned as superintendent of construction with Herbrick & Lawrence, and has organized a new corporation known as The Electric Equipment Company. Jovian Jones is secretary and treasurer of the new company.

* * * *

H. L. HARPER, Po. 3044, who has been connected with the Dallas (Texas) branch of the Western Electric Company, and who was formerly connected with its Kansas City sales organization, has returned to Kansas City and will succeed C. H. Talmage, Po. 1431, as sales manager.

* * * *

WALTER NEUMULLER, Po. 5402, is making an extended tour of the country in connection with a membership campaign inaugurated by the membership committee of the National Electric Light Association. Jovian Neumuller is chairman of the membership committee of the association.

* * * *

MELVIN SPENCER, Po. 4274, who has been representative for the I. P. Fink Manufacturing Company at Denver, Colo., has returned to the New York offices of the company, at Tenth Avenue and Twenty-Fourth Street. His health, which necessitated his going west, is entirely recovered.

* * * *

L. K. FUNKHOUSER, Po. 12340, has resigned as secretary-treasurer and director of the Dayton (Ohio) Power & Light Company, with which he has been connected in various capacities during the past seven years. He will devote all of his time to his personal interests.

* * * *

W. G. AUSTIN, Po. 16745, has resigned his position as secretary and general manager of the Effingham plant of the Eastern Illinois Utilities Company, Effingham, Ill. Jovian Austin has been connected with the Effingham plant for about twenty years. He will devote his time to his personal interests.

* * * *

R. H. HARPER, Po. 5368, recently resigned his position as general sales manager of the B. & K. Manufacturing Company, New Britian, Conn., and has joined the sales organization of the Western Electric Company. He will be located temporarily at the Western Electric Company's offices at Philadelphia.

* * * *

FRANK E. SCOVILL, Po. 17, until recently secretary and manager, the Laredo Electric & Railway Company, Laredo, Texas, is now business manager of the San Antonio Builders' Exchange, San Antonio, Texas. Jovian Scovill was connected with the Alamo Iron Works a short time before assuming the duties of his present position.

* * * *

CARL GOLIN, Po. 12385, chairman of the recent "One Hundred Point Committee" at Milwaukee, that won first prize fo rcities of its class, has resigned his position in the sales department of the Milwaukee Electric Railway & Light Company and is now manager of the Northwestern Storage Battery Company. Jovian Golin was connected with the Milwaukee E. R. & L. Company for six years. His new headquarters are 140 Mason Street, Milwaukee.

* * * *

ERNEST M'CLEARY, Po. 733V, was elected first vice-president of the National Association of Builders' Exchanges, at the recent convention of the organization at Atlanta, Ga. Jovian M'Cleary is a member of the Detroit Builders & Traders Exchange, and was president of the National Electrical Contractors' Association from 1903 to 1905.

* * * *

LORIN W. YOUNG, Po. 3155, who was formerly Eastern representative for the Jefferson Glass Company of Follansbee, W. Va., has formed a partnership with F. M. EGAN, Po. 4210, until recently with the Lighting Studios Company. The name of the firm is Young & Eagan. They have established offices at 389 Fifth Avenue, New York City.

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LOUIS A. EGAN, Po. 16557, has been appointed general manager of the Electric Company of Missouri, and the St. Louis County Gas Company, of Webster Groves, Mo. He succeeds Charles S. Ruffner, Po. 9955, who, as announced in a previous issue of The JOVIAN, was made vice-president of the Union Electric Light & Power Company, St. Louis.

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HECKERT L. PARKER, Po. 905, formerly contracting and illuminating engineer for the Consolidated Gas, Electric Light & Power Company, Plainsville, Ohio, is associated with Wilfrid Lumley in a recently organized company known as the Conneaut Metal Works, at Conneaut, Ohio. Jovian Parker is business manager of the new company.

* * * *

J. D. TODD, Po. 7968, First Tribune, Kansas City, Mo., has been assigned the territory by the Western Electric Company, in State of Kansas, covered by our late member and Statesman, J. E. Taylor, Po. 15570. Jovian Todd has been with the Western Electric Company for fifteen years and with the Kansas City branch of the company since 1904.

* * * *

CHARLES J. MARSH, Po. 727, has been elected vice-president of the Standard Underground Cable Company, Pittsburgh, Pa. Jovian Marsh has been manager of the eastern and northeastern sales department of the company for many years. He will remain at his headquarters at New York City, and continue to exercise supervision over the sales territory.

* * * *

WILLIS M. DEMING, Po. 261, recently resigned his position with the General Electric Company, Schenectady, after a service of 28 years. He was tendered farewell dinners by his associates on the evenings of March 8 and 13. After spending some time on the Pacific Coast to rest and recuperate, he intends to engage in business, probably in one of the coast cities.

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H. W. EVES, Po. 18752, formerly manager, Hamilton-Beach Manufacturing Company, and secretary, Consolidated Manufacturers' Company, Chicago, has resigned both positions, and is now manager of the Arnold Electric Company, Racine, Wis., located at 923 Marquette Building. He is also handling several other lines such as heating pads, violet ray apparatus, etc.

* * * *

O. H. HUTCHINGS, Po. 12350, was presented with a handsome silver service, and FRANK L. JONES, Po. 13421, with a gold watch, at an enjoyable dinner given in their honor January 22, by the Dayton (Ohio) Power & Light Company. The purpose of the dinner was to celebrate the completion by Jovians Hutchings and Jones of 30 and 25 years continuous service with the company.

* * * *

H. V. CARTER, Po. 858, former president of the Pacific States Electric Company, at San Francisco, has organized a company, known as the H. V. Carter Motor Company, for the purpose of handling Marion-Handley motors. The new company is located at 714 Ven Ness Avenue, San Francisco. C. H. Carter, Po. 1625, his son, is manager of the Los Angeles branch of the company.

* * * *

GEORGE H. DUFFIELD, Po. 4209, has resigned as secretary of the National Electrical Contractors' Association, after seven years' service in that capacity. His resignation takes effect April 1, at which time he goes with the McGraw-Hill Publishing Company, Inc., as business manager of Electrical Merchandising. He will also be associated with the editorial department of the magazine.

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GEORGE C. KNOTT, Po. 1235, has resigned as sales and advertising manager of the Wirt Company, Philadelphia, and formed a partnership with GEORGE L. HATHEWAY, Po. 7154, formerly with Pass & Seymour, Boston. The new company is styled Hatheway & Knott, with offices at 120 Liberty Street, New York. The firm will engage in the distribution of products for a number of electrical manufacturers.

* * * *

J. RUSSELL RAMAGE, Po. 16677, engineer sales department, Louisville Gas & Electric Company, sustained serious injuries in a street railway wreck that occurred in Louisville February 12. In spite of his injuries which amounted to a dislocated wrist and shoulder, a sprained ankle and hip and several cuts, Jovian Ramage heroically aided in the rescue of the other passengers from the demolished cars.

* * * *

CHARLES F. GRAY, Po. 15952, has been elected controller of the City of Winnipeg, Man., for the ensuing year. Jovian Gray is a consulting electrical engineer. He was formerly chief engineer in charge of the construction staff of the Canadian Westinghouse Electric Company. While serving in that capacity he had charge of the installation of apparatus for the Winnipeg hydroelectric system and the terminal stations and substations in the city.

* * * *

LEWIS A. MCARTHUR, Po. 7786, has been promoted to the position of general manager of the Pacific Power & Light Company of Portland, Ore. He has been assistant general manager of the company since 1912 and has also been the editor of the company's bulletin. In addition to his duties in connection with the company, Jovian McArthur has been active in organization affairs, serving as chairman on committees for the Northwestern Electric Light & Power Association and the Portland section of the N. E. L. A.

* * * *

W. J. DOHERTY, Po. 2918V, Thirteenth Chiron, has joined with HENRY G. HAFNER, Po. 10921, in the formation of an incorporated company to represent the following concerns at Chicago: V. V. Fittings Company, McGill Manufacturing Company, Thomas & Betts, Stanley & Patterson, Eck Dynamo & Motor Company,

JOHN F. GREENAWALT, Po. 2308, Fifteenth Atlas, Denver, Colo. He has been an active worker for the Order in his territory and was Rocky Mountain district chairman of the "One Hundred Point Committee" in its recent campaign

Central Tube Company and A. B. Wilson Company. The offices and store rooms of the new company are at 618-626 West Jackson Boulevard, Chicago. Former Chiron Doherty was formerly located at 11-17 Desplaines Street. Jovian Hafner has been connected with the Central Electric Company for the past ten years. The style of the new firm is Doherty-Hafner Company.

* * * *

GEORGE B. TRIPP, Po. 1126, formerly vice-president of the United Gas & Electrical Engineering Corporation of New York City, resigned from that company on March 1 to assume duties as president of the Central Construction Corporation of Harrisburg, Pa. Jovian Tripp has had an extensive experience in central station operation, having formerly been general manager of the Colorado Springs Electric Company, and later took up the management of the Harrisburg (Pa.) Light & Power Company. He is president of the Pennsylvania Electric Association. The Central Construction Corporation, of which he is now president, designs and constructs buildings, manufacturing plants, power plants, etc.

Committee of Jovian Goodfellowship

For the Relief of Worthy Jovians in Distress

J. ROBERT CROUSE, Po. 260-8, Chairman
Nela Park, Cleveland
HENRY L. DOHERTY, Po. 3208-32
Care Henry L. Doherty & Co., 60 Wall St., New York City
ELL C. BENNETT, Po. 3932-13V
Syndicate Trust Building, St. Louis

CREATED by the New York Annual Meeting and given power and funds to act for the relief of worthy Jovians in distress. Application for such relief can be made to any member of the committee by any Jovian, either on his own behalf or in the interest of others. Such applications will be considered as confidential and will be handled solely by this committee.

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OBITUARY

H. C. Chappel, Po. 5609, Statesman-at-Large, assistant sales manager, Manhattan Electric Supply Company, Toledo, Ohio, died at the Flower Hospital in Toledo March 12, after a very short illness. Since his Rejuvenation at Cleveland, in February, 1912, Jovian Chappel has been one of the Order's most loyal members. He was active in promoting its interests at all times. As local chairman of the "One Hundred Point Committee," he won the honorary degree of Vulcan and his name will be among those engraved on the "One Hundred Point Committee" cup of the Cleveland League. Personally, he was of a congenial disposition and was a jovial companion. His friends are numerous and he will be sadly missed by them and by the fraternity to which he contributed such loyal support.

* * * *

The Jovian has learned with regret of the death of the mother of Thomas G. Grier, Po. 273-16, of Chicago, and Edward Grier, Po. 535, of Hartford, Conn., and extends to them the heartfelt sympathy and condolences of the Jovian fraternity.

* * * *

Colonel Curtis V. Hard, Po. 16371, president of the Wooster (Ohio) Electric Company, died at his home in Wooster, Ohio, February 20, from an attack of apoplexy. He suffered from the ailment for about six months and had passed through two severe attacks before he experienced the third February 19, which resulted in his death the following day.

Colonel Hard had been engaged in the electrical business since 1886 at which time he was instrumental in establishing the Wooster-Schuler Electric Light Company. This company was among the first electric light companies to be established in Northern Ohio.

He became president of the Wooster Electric Company in 1910. Under his guidance the company has experienced a consistent growth and enjoyed the advantage of able management.

Colonel Hard was president of the Ohio Electric Light Association during its administrative year 1914-15.

* * * *

N. R. McLeod, Po. 9151, died at his home in St. Paul, Minn., January 12, after an illness lasting nearly nine months. His ailment was cancer of the stomach. Jovian McLeod was fifty-five years old, and was sales agent for the American Steel & Wire Company. He is survived by his wife and three children to whom The Jovian extends the sympathy and condolences of the fraternity.

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B. F. Kierulff, Po. 1631, president of Kierulff & Company of Los Angeles, Cal., died at his home in Los Angeles March 8. Jovian Kierulff had been affiliated with the Order since 1908, having been initiated at the Rejuvenation held at Los Angeles, August 14 of that year.

After graduating from the University of California in 1903, he became a manufacturer's agent, handling electrical supplies at Los Angeles. In 1908 he established the firm of B. F. Kierulff, Jr., Company, (Inc.), later changing the name of the firm to Kierulff & Co.

FEBRUARY REJUVENATIONS

ALBUQUERQUE, NEW MEXICO

TWENTY-ONE members of the Order were present to aid in the Rejuvenation held at Woodman Nall, at Albuquerque, N. M., on the evening of February 13. First Tribune W. P. Southard, Po. 16108, had rounded up six candidates to be subjected to the penetrating glances of Jove. Prominent among them were S. J. Ballinger, new business manager of the Trinidad E. R. T. & G. Co., and W. T. Ritter, proprietor, Lordsburg Power Company.

In addition to the resident members, K. E. Van Kuren, Po. 7062, of Los Angeles, and J. F. Greenawalt, Po. 2308, Fifteenth Atlas, Denver, Colo., were in attendance.

Joviation followed at the Alvardo Hotel.

W. P. Southard, Po. 16098, presided as chairman.

Among those who addressed the meeting were H. Alex Hibbard, Po. 1109, Thirteenth Atlas; J. J. Cooper, Po. 1050, Fourteenth Atlas; J. L. Nunn, Po. 16104, L. A. Bailey, Po. 917, and C. M. Emhart, Po. 16098.

Jovians deserving special mention according to reports are A. H. Halloran, Po. 1291, Twelfth Vulcan; H. Alex Hibbard and J. J. Cooper, who were active in making the affair a success.

* * * *

LIMA, OHIO

OWING to the limited time between the date of deciding to hold a Rejuvenation and that on which it was held, but four candidates were ready for the initiation ceremony at Lima, Ohio, on the evening of February 15. However, there was no lack of enthusiasm in evidence. In fact, the amount of interest in Jovianism displayed at the Rejuvenation presages a great deal of activity for the future.

Arrangements were made to hold another Rejuvenation May 15. The date would have been set earlier but for the fact that each member present promised to produce two candidates and it was decided to allow ample time for the fulfillment of their promises. This will mean at least thirty new members for the May Rejuvenation.

The Rejuvenation and Joviation were held at the Norval Hotel, eleven members and guests being present.

G. F. Bertke, Po. 3010, presided at the banquet.

The guests were J. W. Bryant, Po. 15460, of Cincinnati, and H. R. Lemon, Po. 3842, of Cleveland.

According to reports, W. P. Hurd, Po. 9798, deserves much credit for his activities in making the affair a success.

Following is the Degree Team that officiated: W. P. Hurd, Po. 9798, Jupiter; J. C. Sweeney, Po. 15908, Neptune; W. J. Crawford, Po. 12336, Pluto; J. F. Bertke, Po. 3010, Vulcan; D. V. Leatherman, Po. 15904, Mercury; J. W. Bryant, Po. 15460, Hercules; F. R. Harris, Po. 16164, Mars; H. R. Lemon, Po. 3842, Apollo, and V. H. Effinger, Po. 15900, Avrenim.

* * * *

HARRISBURG, PA.

FOUR CANDIDATES were Rejuvenated at the Rejuvenation held at the club rooms of the Engineers' Society of Pennsylvania on the evening of February 15.

Those initiated were W. R. Lutz, John W. Ostertag and Howard M. West of the Harrisburg Light & Power Company, and J. E. Sweeney, of the Bell Telephone Company of Pennsylvania.

At the Joviation held in connection with the Rejuvenation, L. L. Farree, Po. 18865, First Tribune, presided as chairman.

J. C. Thompson, Po. 18877, electrical engineer, United Electrical Company & Valley Railways, Lemoyne, Pa., was the principal speaker.

From reports received, Horace B. Pratt, Po. 6380, deserves much credit fo his activities in making the affair a success.

* * * *

Be ambitious. To rest content with results achieved is the first sign of business decay.

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WICHITA CHARTERED LEAGUE No. 11 SUPPORTS NEWLY FORMED "GREATER WICHITA COMMERCIAL COMMITTEE"

THE JOVIAN LEAGUE of Wichita, Charter No. 11, endorsed the civic organization, known as the "Greater Wichita Commercial Committee" at its meeting at the Wichita Club, March 5. The "Greater Wichita Commercial Committee" is an organization recently formed for the purpose of harmonizing the various commercial and civic clubs of the city. It is composed of members from all other clubs, and its object will be to promote a spirit of co-operation for the purpose of advancing the city's interest.

The endorsement by members of The Jovian League came at the conclusion of an address made before the League by James P. Sullivan, vice-president, Farmers & Bankers Life Insurance Company.

The advantages of the plan to create a body representing all organizations were outlined by Mr. Sullivan, who showed how the united efforts of all clubs would result beneficially to the city.

President C. R. Lewis, Po. 15815 appointed the following committee to represent the Jovian League in the new organization:

H. S. Sladen, Po. 15822, manager, Kansas Gas & Electric Company; R. M. Sutton, Po. 15859, president and manager, Southwestern Electric Company; L. W. Ghent, Po. 18713, traffic manager Arkansas Valley Interurban Ry. Company; H. W. Arnold, Po. 18708, distributor The Delco Light System; L. J. Harvey, Po. 6546, representative, General Electric Company.

* * * *

Jingles From Mythland

ARACHNE

IN EAST Olympus lived a merry maid,
Arachne named—a nervy little jade,
Who knocked Minerva's favorite weaving game,
And muchly peeved that proud and haughty dame.
"Minerva thinks," Arachne said, "she's It,
But she can't drive a loom a little bit."
When this reached Minne's ears it got her nan,
And sweet revenge she straight began to plan.
"But first," said she, "I'll shame the little fool,"
And stumped Arachne to a weaving duel.
Minerva wove a lot of classic stuff—
Herself, Twelve Heavenly Powers, and all that guff;
Arachne realistically wove
Some pranks of Jupiter, the well known Jove—
Such as Europa's Bull, and Leda's Swan,
The Golden Shower, and other goings on,
Till Minnie, red with wrath, cried, "Hold, enough!
How dare a mortal pull that inside stuff!"
She tore the web to tatters, to efface
The woven tale of Father's fall from grace.
Guessing her fate, Arachne, to save time,
Hanged herself promptly to a neighboring lime,
But Minnie cut her down, remarking, "Nay,
Be thou a spider till earth's final day!
Wherever hangs a web will be your home,
A parlor light as Aphrodite's foam,
From which, like lightning from a cloudless sky,
You'll dart and seize the unsuspecting fly;
Until you meet up with your certain doom,
Falling a victim to the o. f. broom!" AL.

Clipped from the Chicago Tribune by Homer E. Niesz, Po. 306V, Past Jupiter Thirteen.

* * * *

In business watch your competitors. No one man or concern has a monopoly of all the best brains and methods. Let competition be an incentive to your energy and ambition. Give the other fellow a fair square deal and beat him out on your merits.—Walter H. Cottingham.

J. E. COWLES, Po. 1549, Fifteenth Apollo, superintendent, Shreveport Gas & Electric Company, Shreveport, La. "Jim" Cowles is a constructive member of the Order and, because he believes sincerely in its work, never misses an opportunity to lend a willing and efficient hand. He is one of the most popular of the southern fraternity.

Write a Jovian Song

The B. H. Stief Jewelry Co.

offers a handsome piece of Jewelry for the best Jovian Song, to be selected by

JAS. A. CAYCE, Po. 2416, and
ELL C. BENNETT, Po. 3932-13V, Mercury

All Jovians are eligible to participate in the contest. Submit your songs, either with or without music to

JOVIAN ORDER
1415 Syndicate Trust Building
ST. LOUIS, MO.

The secret of success is constancy of purpose.—Disraeli.

* * * *

Business is but a means to an end. It is but the occupation by which you are to exercise and develop your God-given qualifications and talents. It is the arena in which you are to practice day in and day out for the great race of the world, the successful life.—Walter H. Cottingham.

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NEWS OF JOVIAN LEAGUES

Los Angeles Henry F. Withey, chairman of the committee on city planning for Southern California, Chapter of Architects, A. I. A., addressed the luncheon meeting of the Los Angeles League February 14. His subject was "Constructive City Planning." George Cromwell Blower, ex-national president of College Organization, of Birmingham, England, spoke on "The Value of Trained Memory." O. E. Thomas, Po. 2006, district representative, Kimball Electric and other companies, presided as chairman.

February 21, F. F. Foster, Po. 14227, presided as chairman, introducing as speakers Judge George S. Richardson of the Los Angeles Police Court, who spoke on "Juice to Jail," and George P. Adams, attorney and orator, whose topic was "The Aftermath."

At the meeting of February 28, the speaker of the day was Chas. F. Lummis, president of the Land-Marks Club, founder of the Southwestern Museum, historian, traveller and author. He took for his topic "By Jove." A. E. Revenscroft, Po. 18078, manager, The Baker-Joslyn Company, presided as chairman. Misses Nell Lockwood and Glenora Zink furnished some delightful music by the rendition of songs selected especially for the occasion.

Dr. Ernest B. Hoag, physician and psychologist of the Juvenile Court of Los Angeles County, addressed the League under a topic of "Juvenile Court Problems," March 7. Phil G. Gough, Po. 18056, president, Listenwalter & Gough, was chairman of the meeting.

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Pittsburgh Brigadier General Albert A. Logan, commanding Second Brigade, N. G. P., addressed the Pittsburgh League February 22. The correlative subjects of his address were "George Washington," "Preparedness" and "Military Tactics."

Announcement was made of the Jovian dinner dance to be held at the German Club on the evening of March 17. The ladies' committee in charge of arrangements were Mesdames R. M. Kerschner, F. F. Stickle, A. G. Pierce, Henry Harris, G. K. Lanz, C. J. Stehle, G. W. Provost, J. J. Kenny and Ludwig Hommel.

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New York The regular monthly meeting of the New York League was held at Stewart's Restaurant, February 7. J. M. Wakeman, Po. 524, Statesman-at-Large, presided. A letter was read from Arthur Williams, Po. 1917, president of the League, expressing his regret at not being able to attend, on account of being at Palm Beach. He expressed his hearty approval of the action taken by the board of directors at its last meeting.

Amendments to the constitution were then considered and unanimously adopted. The amendments provide for two vice-presidents and two additional directors.

Jas. R. Strong, Po. 742-4, Sixth Pluto, made the following nominations: Vice-presidents: J. M. Wakeman, Po. 524, Statesman-at-Large; Frank E. Watts, Po. 1509-47, Past Jupiter Eleven. Directors, Wm. F. Leggett, Jas. H. Betts, Po. 6765, Fourteenth Vulcan, and F. L. Livingston.

The following committees were appointed:

Membership: J. Lloyd Prince, Po. 4263, chairman; Albert Goldman, Po. 5358, J. Wynne Jones, Po. 18664, A. K. Baylor, Po. 6974, A. F. Chamberlain, Po. 17194, Roger Williams, Po. 3661, B. J. Aplin, Po. 11894, G. V. Smith and H. M. Walter, Po. 8701.

Entertainment: E. G. Hines, Po. 16222, chairman; A. D. Walters, Po. 19255, J. A. F. Randolph, V. C. Giplin, Po. 452, H. W. Casler, Po. 18654, Louis Hengerer, Po. 6773, John Tyronne Kelly, Po. 18665, Warren Hinchliffe, Po. 18662, E. Burt Fenton, Po. 18446, and David T. Brown, Po. 11908.

Publicity: Harry W. Alexander, Po. 17191, Elliot Reid, Po. 12008, and Earle Whitehorne, Po. 2480.

After the appointment of committees, W. F. Schmidt was introduced and addressed the meeting. His subject was "Speeding the Spoken Word."

Hon. Joseph Hartigan, commissioner of weights and measures of New York City, addressed the League, March 7. His subject was "Is There a Food Crisis in New York City?" His address was preceded by a few remarks from Mercury Ell C. Bennett, Po. 3932-13, Martin J. Wolf, Po. 6027, Fifteenth Ajax, and other visitors.

* * * *

Chicago "Landscape Gardening in the Middle West," was the subject of an address made before the Chicago League, February 15, by Dr. William Miller, who has been closely associated with much of the important landscape gardening in the Middle West. The lecture was an illustrated one showing $10,000,000 worth of landscape gardening.

Representative George R. Bruce, who has become a national figure because of his fight against whiskey, addressed the League March 1. His subject was "Why Whiskey Should Go."

C. W. Pen Dell, Po. 3253, presided as chairman of the meeting.

Announcement was made of the election of five new members of the club.

"Our Government and Business"was the subject of an address delivered before the League March 8, by Edward F. Hurley. Until February 1 he was chairman of the Federal Trade Commission, at which time he resigned because of business that required his attention in Chicago.

The speaker was introduced by Ainslee A. Gray, Po. 2271, general manager of the Electrical Review.

Mr. Hurley presented some startling facts concerning the lack of preparedness of the industries of the country. He told of the good work the Federal Trade Commission is doing in assisting big business in the solution of some of its difficulties.

E. B. Rosa, chief physicist of the Bureau of Standards, Washington, D. C., addressed the League March 15.

* * * *

Cleveland Frank Goewey Jones, formerly president of the American Electric Fuse Company, was the speaker at the luncheon meeting of the Cleveland League February 15. He delivered an exceptionally interesting address under the title of "Another Million-to-One Chance." N. H. Boynton, Po. 5604V, president of the League, presided as toastmaster.

A. W. Sidwell, Po. 13390, presented the League with a new gavel.

The Cleveland Engineering Society invited the League to attend a lecture, illustrated by motion pictures, at the East Technical High School February 13.

"Undeveloped Sources of Power," was the subject of an address made by Dr. Chas. S. Howe, president of the Case School of Applied Science, March 1. Dr. Howe presented some grave questions that the engineer of the future will be called upon to solve.

Entries for the checkers, chess and cribbage tournament were announced. The members are taking a great deal of interest in the games.

The board of directors announced that drastic action would be taken with delinquent members and a number dropped March 1.

W. W. Freeman, Po. 1899, president of the Union Gas & Electric Company, of Cincinnati, addressed the meeting March 8, on "Co-operation."

George E. Miller presided as chairman.

In the weekly bulletin of the League, "Jovian Jottings" section, was published one of the songs contributed for entry in the B. F. Steif & Co. song contest. According to the "Jottings," Harry C. Turnock, Po. 5658, is the author.

A special entertainment and party was given at the club March 2. The entertainment features consisted of motion pictures, music and dancing.

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St. Louis An illustrated lecture on "Submarines," delivered by Lieut. E. R. Morrissey, U. S. N. before the League February 20 drew a big crowd. The speaker, who is supervising the building of engines for submarines by the Busch-Sulzer-Diesel Engine Works, described the submarine through its various stages of development.

Herman Spoehrer, Po. 3947, presided as chairman of the meeting.

Announcement was made that the following companies had agreed to take charge of luncheons on the dates assigned them: Century Electric Company, Luminous Unit Company, Southwestern Bell Telephone Company, The Electric Company, The Wagner Electric & Manufacturing Company, W. N. Matthews & Brother and the Missouri Pacific Railroad Company.

February 27 was "Red Cross" day. Addresses were made by J. J. O'Connor, chairman of the Chicago Red Cross, and Geo. W. Simmons, chairman of the St. Louis branch of the organization.

At the conclusion of the addresses Herman Spoehrer, Po. 3947, was appointed as chairman of the committee to handle the applications for membership of the League members.

P. W. Coyle, traffic commissioner of the Chamber of Commerce, gave an outline of the causes that contributed to the present freight congestion of the country, in an address entitled "Traffic Conditions," March 6.

B. H. Mann, Po. 16756, signal engineer, Missouri Pacific Railroad Company, presided.

On March 13 Branch Rickey delivered an entertaining and enlightening address on "The Relationship Between Business and Base Ball."

Thomas H. Bibber, Po. 158V, Twelfth Pluto, presided as chairman.

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San Francisco Chas. C. Staehling, Ph. B., of the University of California, who is giving the San Francisco Section of the American Institute of Banking a series of lectures on the finances and management of business, addressed the San Francisco League February 28, on "The Pulse of Our Business and How to Know if it Beats Properly."

H. C. Reid, Po. 9403, presided as chairman of the meeting.

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Kansas City The Kansas City League had for its speaker February 16, W. S. Woodland, Po. 19203, supervisor of safety, Kansas City Railways Company. He gave an outline of the campaign now being conducted in the public schools to promote safety, illustrating his address with moving pictures.

On March 2 the League entertained Jupiter Henry L. Doherty, Po. 3208-33, and Mayor Edwards. The mayor addressed the League on "The City Charter." Mr. Doherty followed with a speech in his usual interesting and forceful style.

The meeting was attended by 85 members.

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Winnipeg Thirty-six members of the League were in attendance at the luncheon meeting of the Winnipeg League, February 8, at the St. Charles Hotel.

E. H. Smith, Po. 4391, president of the League, presided as chairman of the meeting.

A portion of the time of the meeting was devoted to the discussion and explanation of the proposed law to license electrical journeymen, which is now before the Provincial Legislature.

Jas. M. Lemay, Po. 19401, outlined the work of the committee which represents the League in the Returned Soldiers Association. He described the methods whereby men are being directed who desired to learn electrical work during their convalescence from wounds. It is expected that forty men will be placed during the year in this way with the central stations, motor repair companies and other electrical concerns of the city.

The "Bonspiel," which is now under way, was also discussed at the meeting.

Battle Creek, Mich. Prof. Walfried Benson, addressed the Battle Creek luncheon meeting March 5, taking for his subject "Something Regarding the Nature of Electricity."

J. F. Reynolds, Po. 13965, president of the League, presided as chairman of the meeting.

The following prominent visitors were in attendance: H. C. Goldrick, Po. 1756, Chicago; Thomas J. Tighe, Po. 11211, Jackson, Mich.; Mark Walker, Po. 2283, Toledo, and L. R. Klose, Po. 13959, Kalamazoo, Mich.

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New Orleans Major Allison Owen was the principal speaker at the New Orleans luncheon meeting held at the De Soto Hotel March 6. In his address he lauded the work of the artillery on the Mexican border. He described the arduous service that branch of the army is called upon to perform.

He stated that the so called "Silk Stocking" battery made the best kind of soldiers. In commenting on their work, one of the officers stated that he was pleased to find that they could march and shoot.

Capt. L. Rodgers Litton of New York, who was in New Orleans in the interest of the preparedness campaign of the National Security League, addressed the meeting on "Preparedness," March 13.

W. J. Aicklen, Jr., Po. 5666, First Tribune, presided.

* * * *

Nashville Nashville Jovian League continues to promote the "Safety" movement which was inaugurated some months ago. At the luncheon meeting of the League at the Tulane Hotel, March 14, J. A. Cayce, Po. 2416, submitted a proposal to paint safety warnings on all street crossings of the city.

Among the visitors present was Chas. S. Nollis, Po. 1244, of the F. D. Lawrence Electric Company, Cincinnati.

* * * *

Louisville Members of Jovian Chartered League No. 6 were given information regarding the service that would be required of electrical engineers in case of war, by Major George R. Spalding, United States Engineer, at their luncheon meeting March 12. There were over one hundred members of the League at the Hotel Henry Watterson to hear Major Spalding's address. He explained the nature of the "Federal Reserve Corps," and gave a comprehensive outline of the part electricity and electrical engineers were taking in the European war.

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UNION ELECTRIC LIGHT & POWER COMPANY OF ST. LOUIS AND THE ELECTRIC COMPANY OF MISSOURI CONSOLIDATE

The Union Electric Light & Power Company of St. Louis, Mo., and the Electric Company of Missouri, Webster Groves, Mo., operating in the suburban towns of Maplewood, Webster Groves, Kirkwood, Ferguson and St. Charles, have consolidated. The style of the new organization is "Union Electric Light & Power Company."

According to a statement made in "Wire and Pipe," the official organ of the company, superior financial arrangements will result from the consolidation, reducing the capitalization of the combined companies.

The consolidation does away with a feature that has caused much criticism, namely, the charge made by The Electric Company of Missouri for water-power contracts which it received from the Water Power Company and delivered to the Union Electric Light & Power Company.

This criticism is pointed out to be unjustified, as the Electric Company of Missouri only earned a fair return on the investment in equipment which they had installed to give the service.

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

The Real Prize

By W. R. J.

YOU dream and glimpse a vision of some
gilded hall of fame,
Some height whose summit is aglow with
hope's inspiring flame;
You picture there a glory, either golden
or sublime,
But visions rarely show you all the mountains
you must climb.

Below the peak of every dream there lies
a rugged slope,
And only he who scales its crags may
realize his hope.
The dream is but a call to wake you
from your apathy,
A gentle knock upon your door—your
opportunity.

It holds a picture to your mind of something
to be done—
A mirage of achievement to which your course
may run;
The obstacles that lie between and weave
into the plan,
Are set within the scheme of things to make
of you—a man.

If you could reach the goal of dreams along
the Primrose-way,
You'd miss the real treasures that are
gathered from the fray.
The dream-prize is a bauble—it's the work,
the good you do,
That yields achievement's blessing that is
Life's great prize for you.

* * * *

Essays on Mysteries, Phenomena and Doubt

WHAT ELECTRICITY IS

THE question, "What is Electricity?" is one that has puzzled humanity ever since anyone got near enough to it to find out that if properly caged or chained it would not bite or tear off a limb or two.

Previous to that time the human race did not seem to care what it was as long as they could keep out of its way.

About the only thing ever known to defy untamed electricity was one Ajax. By boldly waving his ears at the flaming sword of Jupiter, he won a place on a pedestal which he has occupied ever since.

Whether or not Ajax knew what electricity was no one seems to know. There are a lot of people in the world today who make fun of Ajax who do not know any more about it than Ajax did.

There is one thing about electricity that every one will have to admit, it is something.

Having established that fact beyond all reasonable doubt, we will proceed to analyze it.

To begin with, Benjamin Franklin first discovered it scientifically by fishing it out of the air. He used a kite and a string for tackle and a key for bait. Electricity bit very readily we are told. Uncle Ben landed one, or some, whichever you like, and put it in a bottle.

Would you judge from that that electricity is a fish? No? Well, although we do not believe you can prove it isn't a fish, we will let you have your way about it.

Now we have established two things. First, that electricity is something, and second, although it bites at a bait, and is caught on a line, it isn't a fish.

In the next step we find that electricity was originally an inhabitant of the air. So far as we know there are but four other things that inhabit the air. They are birds, clouds, air-ships and microbes. There may be spirits but we can not afford to deal with with suppositions.

It is practically certain that electricity is not a bird. Birds lay eggs, you know, and although specimens of electricity have been kept in captivity, no storage battery ever revealed where this propensity of the feathered tribe has ever been emulated in its activities.

That brings us to clouds. A great many people might believe it foolish to try to classify electricity as a cloud. But did you ever stop to think that there is never any lightning where there are no clouds. However, there are frequently clouds where there is no lightning, so that settles that point.

As far as electricity being an air-ship, did you ever hear of any one flying around in an electric spark. I believe you will admit it is impractical.

Now for microbes. No doubt you have seen a microbe. I allude to a fully developed microbe—one that can perform all the functions attributed to a member of the species? Well, did you ever see one illuminate an arc-light? Do you think enough of them could be rounded up to lift an elevator with thirteen fat people in it? No you don't, and that proves electricity is not a microbe.

That cleans up the air, doesn't it? We will have to look for a solution of the problem on the ground. We might tackle the ocean but I do not want to endanger the lives of our readers. Although this is a serious question there is no use of running the risk of getting sunk by a torpedo to solve it.

In fact the question has already been solved. The solution of this perplexing problem has been arrived at by two men occupying entirely different stations in life and following entirely different vocations. The strange part about the solution is it came to these two men at identically the same moment, although they were miles apart and neither knew of the existence of the other.

At the time referred to Prof. Phenominus Allison Chemicpuddle, Ph. D. LI. SCV, H20, laid aside his head-gear, removed his X-Ray glasses from his eyes, slipped his hand out of a rubber glove and with a look of exultation on his face wrote in his analysis book:

"Electricity: An imponderable and invisible agent disintegratively composed by the convulsive action of decomposing ethereal strata, combusted either spontaneously or artificially by frictional action."

At the same time, the other man a plain, everyday lineman solved the problem.

While lighting his pipe, his assistant was agitated by a speculative thought.

"Bill," he said, "What is the juice, anyway?"

Bill released his hold on the wire he was twisting and gazed thoughtfully into space.

"Its ahelluvamystery," he replied.

There are the two solutions. The two answers to the great problem. Choose whichever you like.

* * * *

Mission of Electricity

By W. R. J.

To light the shadows that are dark and cloy,
To lighten labor and to make of toil a joy,
To add to beauty and decrease the arduous,
To lend to science some new impetus,
To bind the peoples of the earth with closer ties,
To clear delusion and to civilize,
To aid in progress, to reclaim, to build,
To wake ambition apathy has stilled,
To minimize both pain and misery,
These are the tasks of electricity.

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Practical Lessons in Electricity

LESSON TWENTY-FOUR

HOW REVOLVING-FIELD ALTERNATORS PRODUCE E. M. F.'S

By TERRELL CROFT

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THE EXPLANATION of the induction of e.m.f., on the basis of cutting flux, by an alternating-current generator in which the inductor coils are in slots distributed along in the surface of the armature will now be considered in connection with Figs. 1 to 13. The essential principals are the same as those which have already been recited. However, just what happens is not always readily apparent to the student; hence, this detailed treatment. Although in the following it is assumed that the armature is stationary and that the field poles are moved, a consideration of the situation will render it apparent

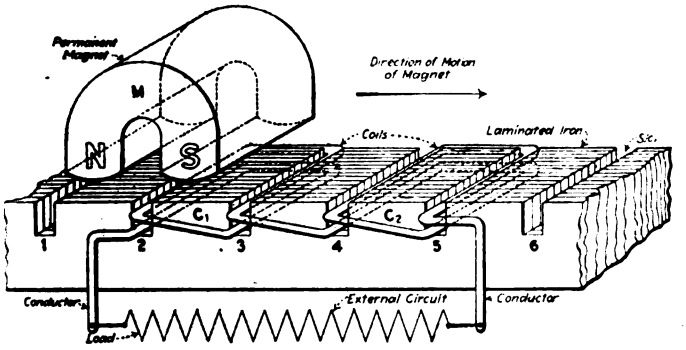

Fig. 1—Diagram to Illustrate Theory of the Induction of an Alternating E.M.F. by an Alternator

that practically the same explanation applies also in the case of moving-armature (revolving-armature) machines.

EXPLANATION.—Consider the apparatus of Fig. 1. A permanent horse shoe magnet, *M*, provides a magnetic field as shown in Fig. 2. The magnet may be moved longitudinally, just above but not touching the stationary laminated iron slab, which has conducting coils mounted in, but insulated from, slots in its surface. The iron slab may be considered as the equivalent of the "developed" armature core of an alternator. The arrangement of the armature coils represents a typical one for alternators but is not the only way in which the coils may be arranged. However, the general principle to be described holds for all practicable arrangements of coils.

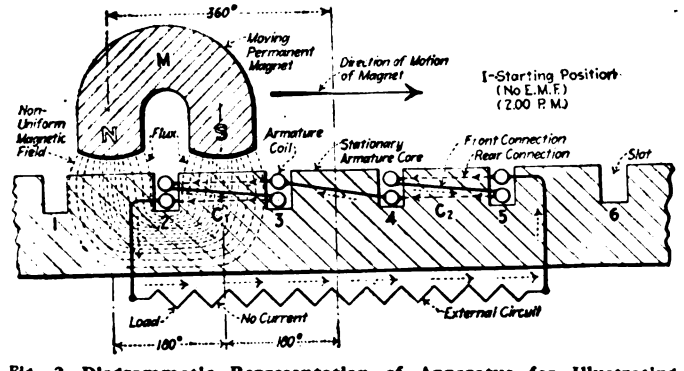

Fig. 2—Diagrammatic Representation of Apparatus for Illustrating Induction of an Alternating E.M.F. by an Alternator (No current at this instant)

Now if the permanet magnet, *M*—the equivalent of field magnets of a revolving-field alternator—is pushed in either direction along over the coils, as shown in Figs. 2 to 12, a sine-wave alternating e.m.f. will be induced in the coil inductors, as will be shown. Obviously, an alternating current will then be impelled in the external circuit connected to the inductors.

An alternating e.m.f. will be induced in the inductors if the permanent magnet is started from the right end and swept toward the left or if it is started at the left end and swept toward the right. In the following explanation it will be assumed that the magnet is moved from left to right.

Assume that the magnet, *M*, is started from the position shown in Figs. 1 and 2. At the instant just after its uniform movement toward the right is commenced the flux of the magnet will not cut any armature-coil inductors because at this instant its flux will obviously tend to complete its magnetic circuit through the iron as shown in Fig. 2.

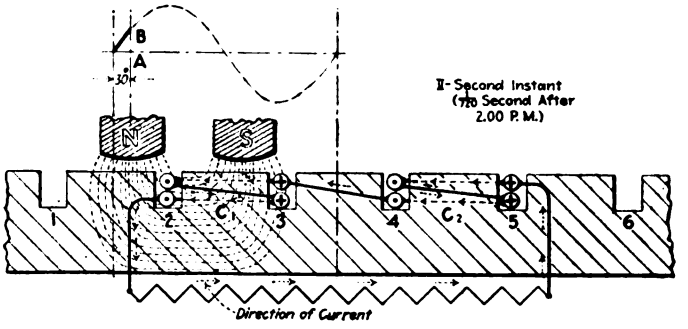

Fig. 3—Field Magnet Has Been Shifted Through 30 Electrical Degrees (Current has started to flow in the positive direction in the external circuit)

Hence, at this instant, no e.m.f. will be induced in the armature inductors. However, as the movement of the magnet is continued, its flux does start to cut the inductors. The flux from the magnet poles as they are moved toward the right, starts cutting the inductors gradually because the poles should be so proportioned, as described hereinafter, that the flux is weak toward the sides of the poles and strongest toward their centers. The instant that the flux commences cutting the inductors then an e.m.f. will be induced in the inductors. The e.m.f. induced at any instant will, as has been shown, be proportional to the rate of cutting at that instant. The directions of the e.m.f.s will be as shown in Fig. 3 for the conditions of that instant. Verify the e.m.f. directions, using the right hand rule for determining the direction of an induced e.m.f.

At the instant just after the magnet has been moved through 30 electrical degrees (Fig. 3) a flux of considerable strength is cutting the inductors in slots 2 and 3. Therefore, an e.m.f. proportional to this rate of cutting is induced at this instant in these inductors. The e.m.f. induced at this instant should be proportional to the vertical distance *AB* (Fig. 3) if the device (shown in Fig. 1) has been correctly designed to induce a sine-wave e.m.f.

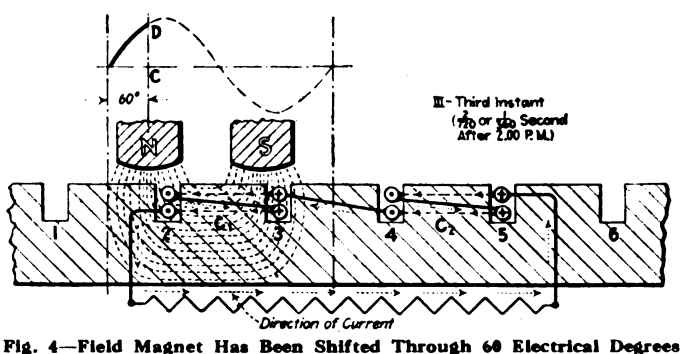

Fig. 4—Field Magnet Has Been Shifted Through 60 Electrical Degrees (A greater current is at this instant flowing in the external circuit in the positive direction)

Note that the e.m.f.s induced in the inductors in slot 2 are in series with and in the same electrical direction as those induced in the inductors in slot 3. The total e.m.f.—the sum of that induced in the inductors in slot 2 and that induced in the inductors of slot 3—impels a current through the external circuit. This current is also forced through the inductors in slots 4 and 5, since they are in series with the other inductors, although there is no e.m.f. being induced in these inductors (in 4 and 5) at this (Fig. 3) instant. Note that the current in the external circuit, at this instant, is from left to right, which we shall designate as the positive direction. The lengths of the dotted arrows, which indicate current direction, is proportional to the current intensity at this instant.

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As the movement of the permanent magnet, *M*, toward the right is continued, the flux will continue to cut the inductors in slots 2 and 3. The e.m.f. will become greater from instant to instant, because, while the magnet is being shifted toward the right, the flux cutting the inductors becomes stronger as the centers of the magnet poles approaches positions directly over the inductors in the slots. At the instant of Fig. 4 the magnet has been shifted through 60 electrical degrees. The e.m.f. being induced at this instant is proportional to the vertical distance *CD*. The e.m.f. is still in the positive direction (hand rule) and the current forced by it through the circuit is in the positive direction, as represented in direction and in intensity by the arrows.

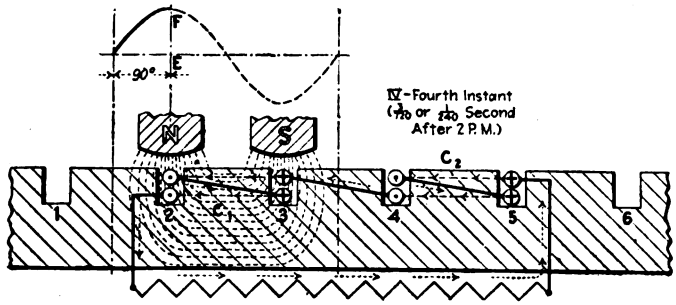

Fig. 5—Field Magnet Has Been Shifted Through 90 Electrical Degrees (Current has, at this instant, attained its maximum value in the external circuit in the positive direction)

As the uniform movement of the magnet, *M*, toward the right is continued, the position of Fig. 5 is soon attained. At this instant the inductors are being cut by the field that is directly under the centers of the magnets where the field is strongest. Hence, at this instant, a maximum e.m.f. proportional to *EF*, is being induced. The current at this instant is therefore a maximum—and it is in the positive direction.

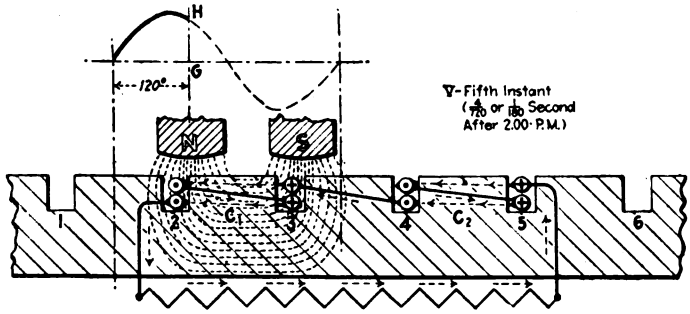

Fig. 6—Field Magnet Has Been Shifted Through 120 Electrical Degrees (Current is now decreasing but is still flowing in the positive direction in the external circuit)

Now as the transition of the magnet, *M*, is continued, the inductors are being cut by a weaker flux, hence the e.m.f. now decreases from instant to instant. At the instant of Fig. 6 the e.m.f. is proportional to only *GH*. At the instant of Fig. 7 the e.m.f. is proportional to *IJ*. The current is obviously also now decreasing from instant to instant—but is still in the positive direction.

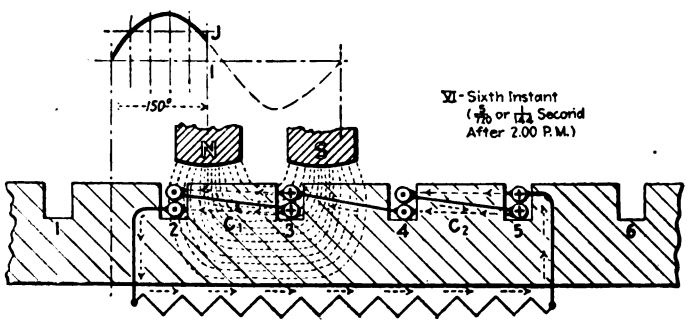

Fig. 7—Field Magnet Has Been Shifted Through 150 Electrical Degrees (Current at this instant is still decreasing but is still flowing in the positive direction)

When the position of the instant of Fig. 8 is reached, no flux is cutting the inductors. Hence, no e.m.f., as indicated at *K*, is being induced and there is no current in the circuit. Note that the e.m.f. and the current have gradually increased to a maximum and decreased gradually to zero, in the positive direction, *JK*, as shown by the sine curve *XBDFHJK* while the magnet, *M*, has been shifted through 180 electrical degrees. The e.m.f. has passed through one alternation.

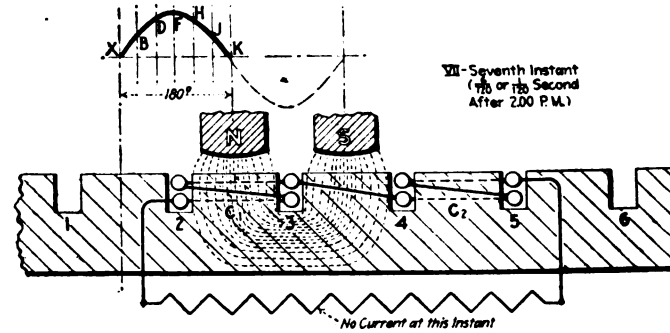

Fig. 8—Field Magnet Has Been Shifted Through 180 Electrical Degrees (No E.M.F. is being induced at this instant, hence there is no current in the external circuit)

As the movement is continued, the flux will now cut the inductors of slots 3 and 4. But note (Fig. 9) that the flux is now cutting the inductors in a direction opposite to that obtaining previously. It follows that the e.m.f. and current will be in a direction opposite to that obtaining during the first 180 degrees. At the instant of Fig. 9, after the magnet has been shifted through 225 degrees, the e.m.f. has now increased in the negative direction so as to be proportional to *LM*. The dotted arrows represent the direction and intensity of the current at this instant. (The pictures are now showing conditions at 45-degree intervals instead of at 30-degree intervals as during the first 180 degrees).

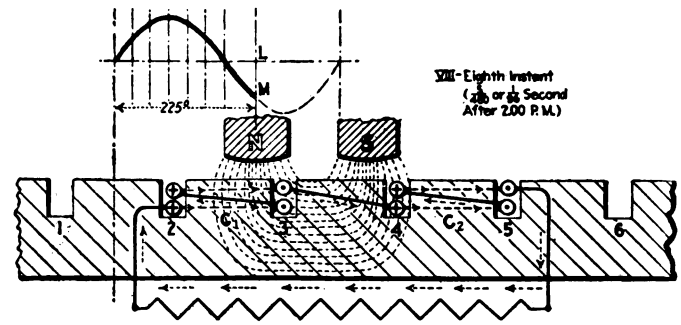

Fig. 9—Field Magnet Has Been Shifted Through 225 Electrical Degrees (E.M.F. and current are now in the negative direction in the external circuit and the current is, at this instant, increasing in this direction)

Fig. 10 pictures conditions at the 270-degree instant. The e.m.f. and current have increased to a maximum in the negative direction. The e.m.f. at this instant is proportional to *NO*. Now as movement is continued, the e.m.f. induced will decrease gradually, as shown by the sine curve until, at the instant shown in Fig. 11 it will have decreased to a value proportional to *PQ*. E.m.f. and currents are in the negative direction.

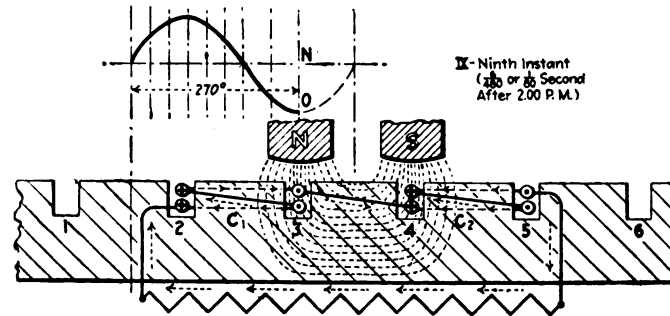

Fig. 10—Field Magnet Has Been Shifted Through 270 Electrical Degrees

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Fig. 12 diagrams conditions after the magnet has been shifted through 360 degrees. The e.m.f. and current have again decreased to zero at this instant. A cycle has been completed.

If it is assumed that the permanent manget, *M*, was moved at such a uniform rate as to induce a 60-cycle e.m.f., it would require just 1-60 sec. to move it through the 360 electrical degrees constituting a cycle. If the magnet were started (Fig. 2) at just 2:00 o'clock Fig. 12 would (for a frequency of 60 cycles) represent conditions 1-60 sec. after 2:00 o'clock. The intervening illustrations illustrate correspondingly the conditions at the different time instants as noted.

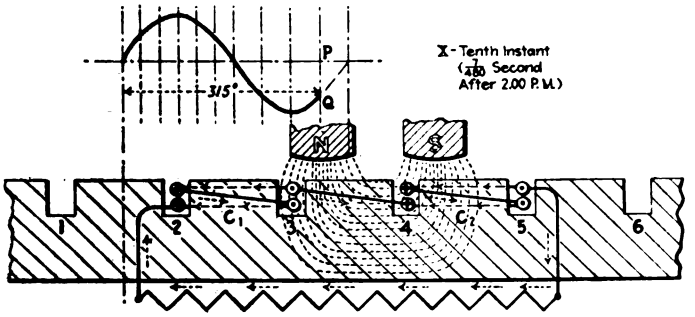

Fig. 11—Field Magnet Has Been Shifted Through 315 Electrical Degrees

Consideration of the facts will then render it obvious that if a number of armature coils are arranged in an armature core and a suitable number of electro-magnetic poles are arranged (as shown in Fig. 13) so that the poles may be swept past the coils, alternating e.m.f.s will be induced in these coils when the poles are shifted. By forming the developed armature into a ring and by mounting the poles on a wheel to rotate within the armature ring, an arrangement whereby the poles may be continuously swept past the coils is provided. Such an arrangement would constitute a revolving-field alternator.

The distribution of flux under a field-pole face is shown in Fig. 14. Note that in this illustration the flux is much denser at the middle of the pole than at the sides. Rounding off the pole face, *AB*, as illustrated obviously tends to produce this

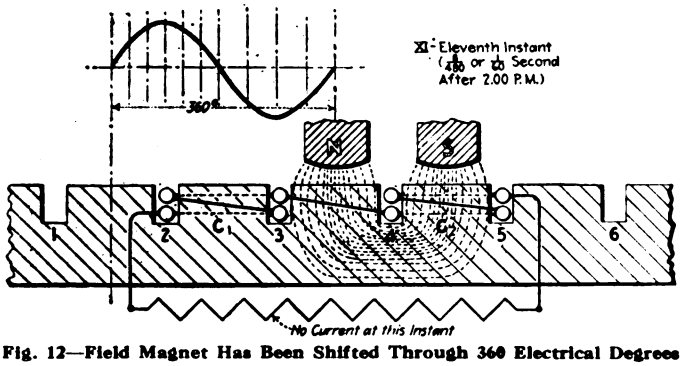

Fig. 12—Field Magnet Has Been Shifted Through 360 Electrical Degrees

condition. As is hereinafter explained such a non-uniformity of field, if consistently planned, assists toward the production of a sine-wave form e.m.f. If the flux in the air gap were uniform all along under the pole face, the e.m.f. induced in an inductor when the pole is swept past the inductor would tend to have a flat tapped form, rather than a sine-wave form. In fact the wave form of the e.m.f. induced by an alternator can be controlled to a considerable extent by varying the contour of the pole faces. The wave form is also dependent on the arrangement of the inductors in the armature slots. *Distributing* the inductors along in the armature surface (rather than *concentrating* them at a few locations) tends toward the production of a sine-wave e.m.f.

The simplest explanation of the induction of an alternating e.m.f. in a coil, past which a magnet pole is moved, is this: While a moving field pole is approaching a position just opposite

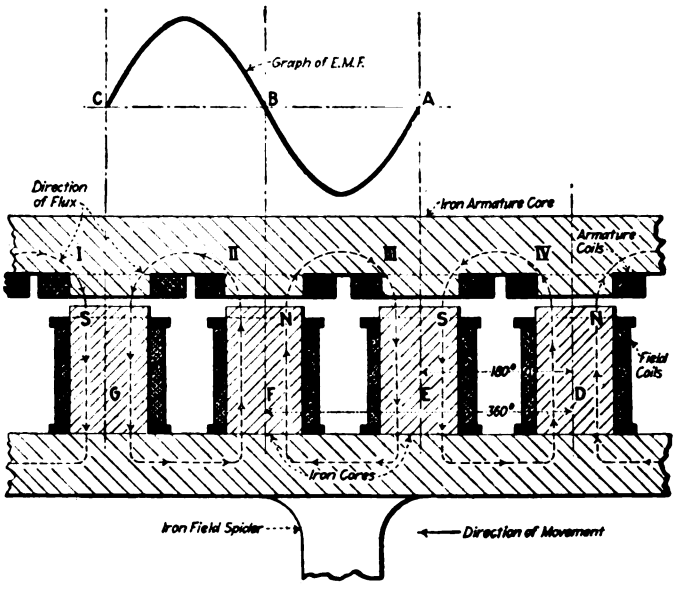

Fig. 13—Development of Armature and Field Indicating Method Whereby an Alternating E.M.F. is Induced

a stationary coil, it is obvious that then the flux enclosed by the coil is increasing. Hence, an e.m.f. is then induced in one (clockwise or counter-clockwise) direction in the coil. When the pole is moving away from the coil, the flux is decreasing which effects the induction of an e.m.f. in the opposite direction. Thus as the pole approaches, moves past and leaves the coil, an alternating e.m.f. is induced in the coil.

Where a high e.m.f. is to be induced in the armature of a revolving-field alternator a number of inductors turns must be connected in series. That this should be true will be evident from a consideration of previous statements, wherein it was explained that in direct-current generators a number of turns are connected in series where voltages sufficiently high to be used in practice are to be induced. It is obvious, therefore, that the *rate of cutting flux*, hence, the induced voltage, obtainable with an arrangement like that of Fig. 1 would be very small. For the induction of usable voltages a number of armature turns of the generators must be connected in series as shown diagrammatically in Fig. 15, which illustrates a principle rather than actual construction. The greater the number of turns in series in the armature winding, the greater the rotating-field flux and the greater the rotational speed of the field, the greater will be the rate of cutting. Hence, the effective induced e.m.f. will be increased if any one of these factors is increased and it will decrease if any one of them is decreased.

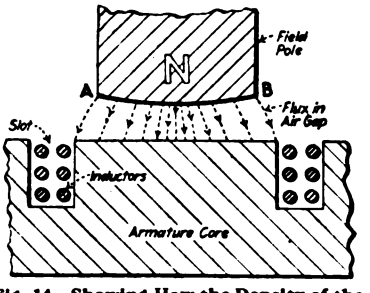

Fig. 14—Showing How the Density of the Flux Under a Field Pole May Vary

An alternation is completed when a field pole has been moved a distance equal to the distance between center lines of adjacent field poles, that is the distance *AB*, Fig. 13. A study of illustrations Figs. 1 to 12 and the text accompanying them will demonstrate the truth of this statement. Also note that *a cycle is completed when any field pole has been moved a distance* (*AC*, Fig. 13) *equal to the distance between the center lines of alternate field poles*—poles of like polarity.

To compute the frequency of the e.m.f. induced by any alternator. (The following rule and formulas are true for revolving-armature or revolving field and polyphase or single-phase

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alternators): *Multiply the number of pairs of poles by the speed of the armature in revolutions per second.* That is:

$$(1)\quad \text{cycles} = \frac{\text{poles}}{2} \times \frac{\text{r. p. m.}}{60} = \frac{\text{poles} \times \text{r. p. m.}}{120}$$

Wherein. *Cycles* = frequency of the machine in cycles per second. *r. p. m.* = revolutions per minute of the rotor—either the field or the armature—of the machine. *Poles* = number of poles of the machine, either field poles or armature poles. It also follows that:

$$(2)\quad \textit{Alternations} = \textit{poles} \times \textit{r. p. m.}$$

Wherein. *Alternations* = alternations per minute of the machine.

EXPLANATION.—Obviously, each time the loop of an elementary bipolar alternator is rotated one complete revolution, the e.m.f. values pass through 1 cycle. If the speed is 1 revolution per second, the frequency will evidently be 1 cycle per second. Thus, with 1 revolution per second and 1 *pair of poles*, the frequency is 1 cycle per second. Plainly, if the speed is increased, the frequency will be increased in proportion. In the formula above "*r. p. m.*" is divided by 60 to get it into cycles per second. "*Poles*" is divided by two to obtain number of "*pairs of poles*".

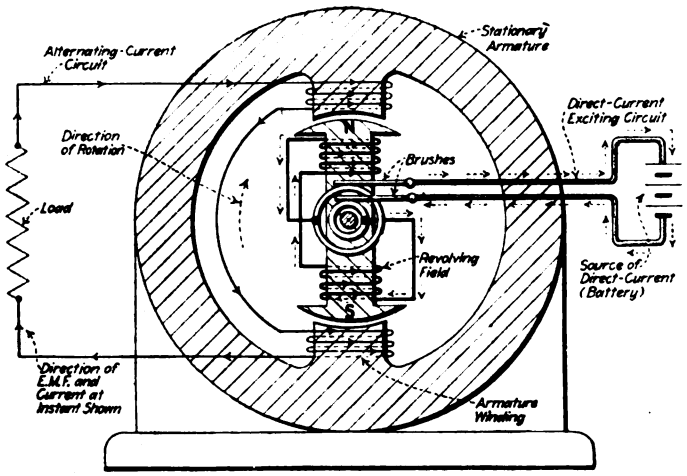

Fig. 15—Diagram of a Two-Pole, Revolving-Field Generator (Single Phase)

A consideration of the facts will demonstrate that the e.m.f. induced by the two-pole "revolving-field alternator" of Fig. 15, which has 1 pair of poles, will pass through a cycle per revolution; with 2 revolutions per second, the frequency will be 2 cycles per second, etc. Now, with a four-pole "revolving-field alternator" which has 2 *pairs* of poles, there will, manifestly, be twice as many cycles per revolution. Hence, it is apparent that the frequency is also directly proportional to the number of poles.

See the table in the author's AMERICAN ELECTRICIANS' HANDBOOK showing frequencies for different numbers of poles and speeds and vice versa.

EXAMPLE.—If a two-pole alternator (Fig. 15) is driven at 3600 r. p. m. what will be the frequency? SOLUTION.—Substitute in the formula (1) *cycles = poles* × *r. p. m.* ÷ *120* = 2 × 3600 ÷ 120 = 7200 ÷ 120 = 60 *cycles*.

EXAMPLE.—If a four-pole alternator is to operate at 60 cycles at what speed must it be driven? SOLUTION.—*r. p. m.* = 120 × *cycles* ÷ *poles* = 120 × 60 ÷ 4 = 7200 ÷ 4 = 1800 *r. p. m.*

NOTE.—It is apparent from the above examples that, for a frequency of 60 cycles, if "7200" be divided by the *number of poles*, the *r. p. m.* will be the result. If "7200" is divided by the *speed* the *number of poles* will be the result. For 25 cycles, the constant "3000" may be used similarly. Thus, for a 60-cycle circuit, a 12-pole field would have to be rotated at 7200 ÷ 12 = 600 *r. p. m.* For a 60-cycle circuit, a 100-pole field would have to turn at 7200 ÷ 100 = 72 *r. p. m.*

Commercial alternating-current generators develop e.m.f.s of approximate sine-wave form. Usually they are almost but not quite true sine waves. It follows that the alternating currents of practice also have approximate sine-wave forms. While the wave form of the e.m.f. induced in a *single* loop rotated at a *uniform speed* in a *uniform magnetic field* is a true sine curve, this wave form is not inherently characteristic of alternators. Practical alternators do not have single-loop inductors nor are their magnetic fields uniform. In fact skillful designing is necessary in commercial machines to obtain the approximate sine wave forms which these machines produce.

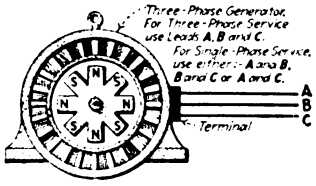
Three-Phase Generator. For Three-Phase Service use Leads A, B and C. For Single-Phase Service, use either:- A and B, B and C or A and C.
A
B
C
Terminal

Fig. 16—Use of a Three-Phase Generator for Single-Phase Service

Single-phase generators are seldom manufactured now, *first*, because there is little demand for them and *secondly*, because polyphase generators are more economical in the utilization of their constructive materials. Where it is necessary that a single-phase current be generated, it is the practice to use two "phase wires" of a three-phase machine (Fig. 16). The single phase capacity of a three-phase machine is 70 per cent of its three-phase capacity. That is, a 100-kva., three-phase machine will deliver 70 kva., single phase.

Coming Rejuvenations

April 4—Tupelo, Miss. First Tribune, H. J. Newbill, Po. 16855, care Slantonville Telephone Company, Tupelo, Miss.

April 5—Battle Creek, Mich. First Tribune, F. Frank Raynes, Po. 13965, care Michigan Carbon Company, Battle Creek, Mich.

April 7—New Braunfels, Tex. First Tribune, G. B. Smith, Po. 6649, 309 Guadalupe St., New Braunfels, Tex.

April 19—Kenmore, Ohio. First Tribune, Harold L. Moyer, Po. 14386, 43 South New York St., Kenmore, Ohio.

April 27—Dallas, Tex. First Tribune R. S. Wakefield, Po. 2606, 1312 Busch bldg., Dallas, Tex.

May 15—Lima, Ohio. First Tribune, V. H. Effinger, Po. 15900, care V. H. Heffinger Electric Company, Lima, Ohio.

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Adopted By Fourteenth Annual Convention
October, 1916

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Dixon, Ill.—Dixon Inn	$1.00	
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Ft. Wayne, Ind.—Wayne	$1.00	
Ft. Worth, Tex.—Metropolitan		
Gary, Ind.—Gary	$1.00	$1.50
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New Orleans, La.—De Soto	$1.00	
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Portland, Ore.—Multnomah	$1.50	
Portland, Ore.—Oregon	$1.00	$2.00
Richmond, Va.—Jefferson	$1.50	$2.50
Richmond, Va.—Richmond	$1.50	$2.50
Roanoke, Va.—Rockledge	$1.00	
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San Diego, Cal.—San Diego	$1.00	
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Seattle, Wash.—Seattle	$1.00	$2.00
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Springfield, Mo.—Colonial		
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Waco, Tex.—New State	$1.00	$2.00
Watertown, S. D.—Kampeska	$1.00	
Winnipeg, Man.—St. Regis	$1.50	
Winnipeg, Man.—Wellington	$1.00	$1.50
Winona, Minn.—Winona		

* * * *

What is a failure? It's only a spur
To a man who receives it right,
And it makes the spirit within him stir
To go in once more and fight.
If you never have failed, it's an even guess
You never have won a high success.

—From "Impertinent Poems," by Edmund Vance Cooke,
Copyright 1907, Dodge Publishing Co.

* * * *

Don't worry when you stumble—remember, a worm is about the only thing that can't fall down.

JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, W. N. Lockhert, Po. 14383, care N. O. T. & L. Co.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, C. O. Nichols, Po. 15537, care Benton Harbor & St. Joseph Railway & Light Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, F. A. Coupal, Po. 584V, care Buffalo General Electric Co.

CHATTANOOGA—Wednesday, 12 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge, 1900 Continental & Commercial Bank Building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, O. B. Marsh, Po. 17718, care Federal Sign System (Electric), 37 East Third street.

CLEVELAND—Regular meeting, Thursday, 12 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Ry. Power & Light Co.

DALLAS—Friday, 12:15 p. m. J. H. Moseley, Po. 11186, care Texas Power & Light Co.

DAYTON—First and third Mondays of each month, 12 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Co.

DENVER—Wednesday, 12:15 p. m., Kaiserdorf Hotel. Secretary, R. Arnold Lewis, Po. 11514, care Edins Lamp Works.

DETROIT—Saturdays, 12:30 p. m., Grill Room, Board of Commerce. Secretary, Oliver Phelps, Jr., Po. 5209.

EAU CLAIRE.—First Monday each month. Secretary, Gurth Williams, Po. 18268.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Co.

GALVESTON—Meet on call. Secretary, Howard Jolly, Po. 16826, care Postal Tel. Co.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Co.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Co.

HUNTINGTON—Last Friday each month, Huntington Hotel. Secretary, H. A. Haddox, Po. 9164, 1116 Fourth avenue.

INDIANAPOLIS—Monday, 12:15 p. m. J. H. Albright, Po. 12484, care Indianapolis Light & Heat Co.

KANSAS CITY—Every other Friday, 12:15 p. m., Sexton Hotel, Secretary, L. E. Shoemaker, Po. 19190, 660 Gates building.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Co.

LOS ANGELES—Wednesday, 12 m., Jahnke's Tavern, 534 S. Spring St. Secretary, Clifton Peters, Po. 12734, 108 Edison building.

LOUISVILLE—Tuesday, 12:15 p. m., Hotel Henry Watterson. Secretary, C. C. Dicken, Po. 16660, care Louisville Gas & Electric Company.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel.

MILWAUKEE—Tuesday, 12 m., Maryland hotel.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Co.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne St., New Orleans, La.

NEW YORK—First Wednesday each month, 12:15 p. m., Browne's Chop House, 1424 Broadway. Secretary, H. E. Cleland, Po. 18656, care Electrical World, 239 West Thirty-Ninth Street.

OKLAHOMA CITY—Monday, 12 p. m., Skirvin Hotel. Secretary, O. T. Jenkins, Po. 14273, care Nunn Electric Co.

PEORIA—First and third Saturdays of each month, 1 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Co.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon St.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, J. H. Van Aernam, Po. 14051, care General Electric Co.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's restaurant, Kellog street. Secretary, J. O. Roser, Po. 10412, care General Electric Co.

RICHMOND—Third Wednesday of each month, Business Men's Club. H. W. Hall, Po. 370, care Western Electric Co.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Co.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Co.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Ridpath, Po. 7739, 505 Rialto building.

SPOKANE—First and third Wednesdays of each month, 12 m., Davenport's hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Co.

STARK COUNTY—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

ST. LOUIS—Tuesday, 12:15 p. m., Mercantile Club. Secretary, Geo. McD. Johns, Po. 9052, Room 401, City Hall.

ST. JOSEPH, MO.—Secretary, W. R. Thomas, Po. 1489, care American Elect. Co.

ST. PAUL—First and third Thursdays of each month, 12:10 p. m., Emporium Tea Rooms. Secretary, A. L. Frankenburger, Po. 5289, care Western Electric Co., 235 East Sixth street.

TULSA, OKLA.—Monday, 12 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G. Walker, Po. 6871, 18 West Third Street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Co.

WICHITA—First and third Mondays of each month, 12 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Co.

WINNIPEG—Every other Wednesday, 12:15 p. m., St. Regis Hotel. Secretary, W. M. Houston, Po. 5995, 1226 Dorcester Avenue.

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THE JOVIAN

Volume Eleven MAY, 1917 Number Six

THE ECONOMIC POSITION OF THE JOVIAN ORDER

SOME OF ITS SPECIFIC ACCOMPLISHMENTS AND FUTURE PLANS

ALWAYS an important, if not the consideration of first consequence in appraising the value of any organization, is the question as to whether it is an economic and industrial necessity, filling a need not met by some other similar body.

The personnel, and scheme of operation of The Jovian Order happily answer that query convincingly in the affirmative.

The Jovian Order occupies a position in the electrical field that is unique, and commands resources for the accomplishment of necessary work, that are not possessed by any other body within the industry.

The Jovian Order is the only electrical association, that includes in its membership representatives of every division and branch of the profession. It is the only body that has affiliated with it, and acting under its supervision, a chain of local organizations. And both of those elements are indispensable factors in the success of any wide-spread movement.

Acknowledging those to be indisputable facts, as we must if we know our industry, there would remain one other point to be decided.

Is The Jovian Order as efficiently utilizing its unique position and scheme of operation, as would some other body to whom it might be possible to transfer those elements of power?

Setting aside for the moment the specific accomplishments of the Order, which alone satisfy this question, we will emphasize one powerful ingredient in the strength of the Order, which, without being critical of other splendid bodies, we know has not proved as potent in any other existing association as it has in The Jovian Order. It is an element that is irresistible in its state of highest development, and one without which great achievement is almost impossible. We do not know how to better name it than to say it is HEART-INTEREST. To differentiate, it is that free giving of the very best that is in one, displayed by the man who owns an enterprise, as opposed to hired effort.

This exceptionally high, animating spirit of loyalty to The Jovian Order, prevalent individually and collectively among its members, has permitted the Order to accomplish an amount of constructive development work for the electrical industry, locally and as a whole, at a cost ridiculously small, by comparison with what similar results would tax the industry if delivered through any other channel.

There have been in the past, and are today, literally thousands of capable, energetic men, scattered everywhere over the face of the United States and Canada, who are devoting many hours of their time every week in the year to unselfish work for the advancement of electrical interests, solely because of their love for The Jovian Order, and their desire to see success crown the labors it undertakes. Witness the recent proof afforded by that body of 1200, styled the 100 Point Committee.

If any individual doubts the accuracy of that statement, he has but in good faith to make sufficient general inquiry to establish its truth to his own complete satisfaction.

When we give full credit to the immensity of this force, to its cost if bought and paid for, if the same spirit could be bought at all, we begin in some small measure to realize the economic and industrial importance of our Jovian organization.

The inspirational factor that creates within the span of years of Jovian effort the brand of efficiency, of productive enthusiasm, the Order has generated among a majority of its members, must of a surety be fundamentally right and entitled to its "place in the sun."

Some Jovian Specific Accomplishments and Future Plans

We will consider here, in the briefest of terms, a rapid-fire review of some of the specific accomplishments of The Jovian Order, and its plans for the future; and there is not one statement made here that is not backed by proof on file in Jovian Central Offices, and open for the inspection of any interested Jovian.

The Jovian Order has builded, numerically the largest, the most effective locally, the most militant, peppery, independent, hard-hitting electrical organization in the world.

It has interested actively in person, and through them their immense organizations, the biggest, brainiest men in the electrical field; interested them in an unselfish manner, giving their efforts not for self-aggrandizement, but for the benefit and the advancement of our industry, our Order and every member of it.

It has organized, equipped and maintained a headquarters and staff—a central clearing-house for ideas—for the gathering, analysis and free distribution to members and leagues, of plans and experiences that help develop the industry.

It publishes a monthly magazine, free to members, that has gained general, favorable recognition not only as a bulletin of our Order, but as a constructive educational instrument.

It has, through its Committee of Jovian Goodfellowship, relieved the great distress of many worthy Jovians and their families.

It has created and operates an employment bureau, that is recognized as a clearing-house for men and positions within our industry. It now has hundreds of applications on file representing every branch in the electrical field.

It has secured a special discount of 10 per cent, for all Jovians in good standing, at hotels in seventy-six cities throughout the United States. Many of its traveling members have through this plan saved ten to twenty times the amount of Jovian dues.

It has, without charge, assisted in—and in a majority of instances been directly responsible for—the organization and operation of electrical leagues in more than seventy cities throughout the United States and Canada. This among other advantages affords a hearty welcome for any Jovian, and ready means of quickly extending his acquaintance among all of the active electrical men in any community supporting one of these leagues.

It has, through concentrated expert study of local leagues, provided a means for standardization through federalization, thus affording a workable method of effective local co-operation in national educational and sales campaigns.

It has gathered helpful data for, promoted and assisted, without charge, scores of electrical shows.

It has induced electrical leagues to engage in civic work for the benefit of their respective cities, thus bringing favorable attention to our profession, and creating friendships for it, on the part of other organizations placed to assist us in our own endeavors.

It has built itself as an international institution, which any member can, in an entirely legitimate manner, use as a vehicle to assist his career. Unselfish aid, given the work The Jovian Order is doing, rarely, if ever goes unrewarded. It has been directly responsible

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

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for hundreds of members becoming known nationally and attaining high places.

Using local activity to good purpose, it has written and furnished free, thousands of notices and news items appearing in the daily press, giving desirable publicity to the electrical industry—space that figured in dollars and cents, if it could be bought, would more than equal the entire income of our Order.

It has brought to bear the fruits of careful organization of local leagues, to assist in national trade promotion movements, to such excellent effect that it has been publicly credited as being one of the most potent influences in making them a success.

It has caused to be produced and offered to Jovians, at greatly reduced rates, Correspondence Courses in Mathematics, Salesmanship and Electrical Engineering, known as "Jovian Efficiency Courses."

It is organizing an International Speakers' Committee for the purpose of addressing business organizations and conventions on subjects of pertinence to the welfare of the electrical industry.

It is educating the public, through the activities of local leagues and daily press publicity, to a proper appreciation of the importance of the electrical profession; creating a realization of the necessity for the success of a local electrical industry—with particular relation to the utilities, as a very essential element in the growth and prosperity of any community.

It has for the past four years paid two and a half per cent of its gross income into a reserve fund, under the custody of the Past Jupiter's Association (to which each Past Jupiter has also generously contributed), the income from which, at the expiration of twenty years from its inception, will be used in co-operative work for the development of the electrical profession and the assistance of Jovians.

It has during the past twelve months, in those cities working in close touch with and under the advice of the Central Office, completed other practical, commercially valuable development work of a variety and extent impossible through lack of space to detail here. However, to be as specific as possible, it included: Co-operative newspaper advertising; special street illumination; electrical parades; special electrical editions of newspapers, entertainment of conventions, electrical bowling clubs and baseball leagues, electrical exhibits at municipal and state affairs, promotion of desirable legislation, effective opposition to undesirable legislation, Municipal Christmas trees and parties, newspaper contests with electrical devices as prizes, co-operative, special sales days, entertainments for the benefit of worthy charities, electrical cooking in restaurants, and participation in a variety of city-boosting enterprises.

In accomplishing these results, The Jovian Order has given its entire income, and every penny has been spent with positive safeguards as to its efficient use.

A committee is investigating a plan to procure accident insurance for Jovians at a considerable reduction in prevailing rates. It is now positively assured that this will be put into effect within the next thirty days, and that the amount saved any member carrying such insurance will more than equal his Jovian dues.

Other special committees are at work on matters of import to the industry, including the investigation of the possibility of securing railroad freight rate revisions on electrical merchandise; the study of the question of standardizing effectively electrical trade terms and discounts; and a definite plan of civic co-operation to be used by local leagues.

Other plans being finally investigated, with practical assurance now that some will be early adopted include: The employment of an electrical show expert and the establishment of circuits of standardized shows and movable exhibits free to chartered Jovian League cities; the addition of an employment expert to the Central Office staff to increase the scope and usefulness of the Free Employment Bureau; the employment of salaried organizers to assist local chartered Jovian Leagues; and one plan, originated by Jupiter Doherty, which when completed and put into effect will be, without doubt the greatest trade development movement ever undertaken

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by any association. There have been three meetings in New York City discussing the details, and the proposition should be ready for Jovian Leagues by June first. The raising of a large fund has been pledged, and will be used, aside from regular Jovian income, in this movement; the biggest men in the industry are to back it with their influence and organizations. It is for the benefit of chartered Jovian Leagues. To give even an approximation of its details and scope would require more space than we can devote to it in this issue. May it suffice for the moment to say, that Henry L. Doherty is giving it his personal and enthusiastic attention, and that that fact is sufficient guarantee of its merit and its success.

So much for specific past performance and future plans. We might add, and with the thought that it is not the least of the advantages of Jovian affiliation, that it affords to a man, the personal satisfaction in knowing, that he is joined with other progressive men, in discharging the debt he owes the profession that is furnishing him his livelihood, and the world its greatest forwarding factor.

In keenly pursuing those channels of activity, that are fruitful of tangible, commercially valuable results, the Order has never for one moment relaxed its efforts to keep burning brightly the early spirit of Jovianism. That spirit that is in the final analysis largely creative of the sentiment and fraternity so necessary to our progress.

The Order has continued, to untiringly father and promote goodfellowship, in its best sense, productive of harmony, between the several branches of our industry. It has written in its book of helpful deeds, as a result of that labor, many a record of localities, in which the understanding and friendships, born through Jovian contact, replaced wasteful competition, and destructive methods of merchandising, with profitable co-operation, and constructive building for the future.

* * * *

ANY INSTRUMENTALITY TO BE USEFUL — MUST BE USED

AND SO it is with Jovianism, just as it is with any other "ism," or anything that has been, or ever will be created by God or man. We have listed in the leading article in this issue some of the things that Jovianism can do, has done and will do for the electrical industry and any or all of its members. On another page we have boiled down into Jovian-Service-Rapid-Fire-Shots a portion of the same group of facts. There is something there for EVERY Jovian if he will USE it. If he does not use any of it, he is very apt indeed to be a dissatisfied customer of Jovianism.

We hold that that fact is most unfair to Jovianism, and that it will be so viewed by each of our members if we can make him view it in the proper light.

We hear much these days of the splendid benefits to be derived from Rotarianism—and rightly so, for it is a magnificent organization, but, no more so than Jovianism. In fact, with all do respect to Rotary, and with the sincere belief that it is worth all and more than it costs any Rotarian, it does not attempt to give as MUCH tangible, direct-from-Central-Office-to-member benefit as does The Jovian Order, and it costs a great deal more.

Emphasizing the excellent spirit that prevails among Rotarians with respect to the benefits accruing to them out of their organization, and also substantiating the key-note of these paragraphs, we find a recent utterance of a prominent member of Rotary, Mr. Guy Gundaker, as follows:

> "On the practical side, the Rotary activities provide an opportunity for increased business through the establishment of cordial, intimate and friendly relations between members. They provide an OPPORTUNITY—NOTHING MORE, NOTHING LESS."

Jovians, let that phrase sink in deep. It contains the answer to every dissatisfied customer of Jovianism, or of any other organization, whether it be social, religious, political, fraternal, commercial, or what-not.

A body can offer one the water,—e'en it may lead one to the needed liquid, but it CAN NOT MAKE ONE DRINK! And if one does not drink he remains thirsty,—thirsty for those very things that are offered, but not so parched of throat that he cannot articulate unjust dissatisfaction.

We admit that all this is brutally blunt and frank, but, isn't that fact submerged in the great truth it preaches?

* * * *

CONSIDER THE TRAVELING MEMBERS

WHEN arranging for Rejuvenations, banquets, luncheons, etc., it should be borne in mind that a number of our members who are travelers can attend these affairs better at the end of the week. A large number of travelers make their headquarters in the cities where these functions are held, and they would be able to attend if they were held Friday evenings, Saturdays or Mondays.

When Jovian functions are held in mid-week these men are usually out on their routes. Many of them are anxious to attend frequently, but are unable to do so because the Jovian luncheons and Rejuvenations in their home cities are held while they are away.

Bear this in mind when arranging your luncheon and Rejuvenation dates.

* * * *

LIMA, OHIO, TO HOLD BIG REJUVENATION AND APPLY FOR CHARTER

V. H. EFFINGER, Po. 15900, First Tribune, of Lima, Ohio, and his able assistants are planning to hold a big Rejuvenation in that city May 15. Committees have been appointed and have held several important meetings to plan future activities and report progress. At the committee meeting, held at Germania Hall, March 16, seventeen applications were reported.

J. M. Bateman, Po. 2610V, First Tribune, of Cleveland, was present at the committee meeting of April 5, and gave the members some valuable information in regard to making the coming Rejuvenation a success. His visit aroused a great deal of enthusiasm.

The League has decided to make a formal application for a Jovian charter on the evening of the Rejuvenation.

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DAYTON LEAGUE HAS BIG BANQUET

ONE OF the most successful affairs ever held in electric circles of Dayton was the Jovian League banquet at the Miami Hotel in that city on the evening of March 14. About two hundred and fifty members and guests were present, included among whom were nearly all the prominent people of the city connected with the electrical industry, and many prominent visitors from other cities.

The event was held as a concluding entertainment tendered the convention of the committee on new business co-operation of the Ohio Electric Light Association.

Charles S. Hall, Po. 12345, president of the League, presided as chairman and introduced D. L. Gaskill, Po. 4499, president of the Greenville Electric Light & Power Company, as toastmaster.

The following speakers were introduced by Jovian Gaskill and addressed the meeting: H. M. Waite, Po. 13456, city manager, City of Dayton; W. W. Freeman, Po. 1899, president, Union Gas & Electric Company, Cincinnati; C. F. Kettering, Po. 13425, vice-president, The Domestic Engineering Company; F. R. Coates, Po. 16245, president, Toledo Railway & Light Company, Toledo, and Judge Roland R. Baggott, of the Court of Domestic Relations.

A cabaret performance between the addresses enlivened the occasion, and a general feeling of goodfellowship prevailed.

Members of the League who, according to reports, deserve much credit for their efforts in making the affair a success are: Frank B. Steele, Po. 13451, Second Tribune, and K. L. Fitzpatrick, Jr., Po. 13410, of the Dayton Power & Light Company.

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PERSONAL POINTERS

Among the pleasures life may give,
Is news of friends who elsewhere live.
A word or two, a line or so,
Keeps us in touch with those we know.
Who would not pause in work or play,
To hear of friends who are away?
Were there no news this life would be
A sphere of fading memory.

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ROBERT J. SMYTH, Po. 16240, secretary of the Export Managers' Club, announces the removal of the offices of the club to 25 Church Street, New York City.

* * * *

H. H. VARNES, JR., Po. 3100, has resumed his duties as engineer with the General Electric Company, in New York City, after an illness of three months.

W. A. LAYMAN, Po 1166V, Seventh Mars, president, Wagner Electric Manufacturing Company, St. Louis, Mo., was called to Washington, April 2, for a special conference of the chairmen of business committees organized by the United States Chamber of Commerce. The purpose of the organization is to work in connection with the Council of National Defense. Committees for the different cities and districts were appointed at the instance of Secretary of War, Baker. Jovian Layman is chairman of the St. Louis committee.

ARTHUR KEMPSTON, Po. 12293, assistant chief electrician of the City of San Francisco, was recently appointed to the position of chief of the city's department of electricity.

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M. R. BUCHANAN, Po. 16096, manager of the Silver City Power Company, Silver City, N. M., has been elected president of the New Mexico Electrical Association for 1917-18.

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T. E. BURGER, Po. 2624, until recently manager of the Western Electric Company, at Los Angeles, has been transferred to San Francisco, where he is now assistant manager for the company.

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CHARLES J. FRENCH, Po. 12470, formerly sales representative of the Economy Fuse & Manufacturing Company, at Chicago, has been transferred to the New York City office of that company.

* * * *

CHARLES B. MONTAGRIFF, Po. 5396, electrical contractor, 2135 Broadway, New York, has been elected secretary of the Independent Electrical Contractors' Association of New York City.

GEORGE CASTLE, Po. 13952, formerly with the Commonwealth Power Company, Battle Creek, Mich., has been appointed manager of the Consumers' Power Company's plant at Charlotte, Mich.

* * * *

T. NORMAN JONES, JR., Po. 14508, formerly chief engineer of railways of the Virginia Railway & Power Company of Norfolk, Va., was recently appointed assistant general manager of that company.

* * * *

F. H. TIDMAN, Po. 830V, treasurer and general manager of the El Reno (Okla.) Gas & Electric Company, has been appointed assistant secretary of the Central Oklahoma Light & Power Company at Oklahoma City.

* * * *

KENNETH LINDSAY, Po. 6557, resigned his position as manager of the Wapsie Power & Light Company, Mt. Vernon, Iowa, April 15, and is now sales manager of the J. B. Terry Company, electrical jobbers, Cedar Rapids, Iowa.

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ROBERT THISTLEWHITE, Po. 12040, is now in charge of the illuminating and jobbing department of Renard & Stary, contractors, Los Angeles, Cal. He was formerly connected with the New York Electrical School, New York City.

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T. C. HAWKINS, Po. 3045, formerly western representative, Holophane Glass Company, at Chicago, has recently joined the sales department of the Jefferson Electric Manufacturing Company, at 426-430 South Green Street, Chicago.

* * * *

J. B. SHICKEL, Po. 17561, who was formerly connected with the Chicago offices of the General Electric Company, was recently appointed superintendent of the Menominee & Marinette Light & Traction Company at Menominee, Mich.

* * * *

FRANK A. WARREN, Po. 9, Second Neptune, secretary and general manager, Toledo Welder Company, Cincinnati, suffered a stroke of paralysis recently. At last report he was greatly improved and well on the road to recovery.

* * * *

W. S. RUGG, Po. 12016, is now manager of the railway department of the Westinghouse Electric & Manufacturing Company, with headquarters at East Pittsburgh, Pa. He was until recently manager of the New York office for that company.

* * * *

EDWARD R. KELSEY, Po. 13192, advertising manager of the Toledo (Ohio) Railway & Light Company, was elected governor of the Rotarians for the departments of Ohio, Indiana and Michigan at the election held recently at Wheeling, W. Va.

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W. B. CRABTREE, Po. 6155, Statesman for Wisconsin, formerly connected with the Mechanical Appliance Company, Milwaukee, recently resigned his position with that company and is now connected with the Globe Electric Company, of Milwaukee.

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EZRA E. WOODBURY, Po. 14484, who for the past ten years has been with the Standard Underground Cable Company at St. Louis, Mo., is now representing the Belden Manufacturing Company in that city. His offices are in the Security Building.

* * * *

E. B. HEIMBACH, Po. 12830, formerly connected with the Railroad Commission of the State of Wisconsin, has recently accepted a position as district superintendent with the Wisconsin Power, Light & Heat Company, with headquarters at Berlin, Wis.

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C. F. Gray, Po. 15952, consulting engineer, Winnipeg, Man., was recently elected to the position of controller of the City of Winnipeg. Jovian Gray's election demonstrates the active part Winnipeg members of the Order are taking in the civic affairs of the city.

* * * *

J. J. Dreyfuss, Po. 9915, formerly president of the Burchwell Manufacturing Company, St. Louis, Mo., has resigned from that position and is now sales manager of the Chicago branch of the Interstate Novelty Company, with headquarters at 541 Washington Boulevard, Chicago.

* * * *

A. J. Authenreith, Po. 14600, formerly chief engineer of the Central Illinois Public Service Company, Mattoon, Ill., has been appointed chief mechanical engineer of the Middle West Utilities Company, Chicago. He has been given charge of that company's ice plants and water works.

* * * *

Frank H. Stewart, Po. 530V, was re-elected president of the Frank H. Stewart Company of Philadelphia at a recent meeting of the board of directors of the company. W. Burnett Stewart, Po. 1846, was re-elected vice-president and Samuel Bondman, Po. 10116, general manager.

* * * *

L. E. Mohrhardt, Po. 17272, who was recently transferred from Houston, Texas, to Tulsa, Okla., by the Southwest General Electric Company, has been seriously ill for several weeks. At the latest report he was recovering and hoped to be able to resume his duties within a short time.

* * * *

H. Akhurst, Po. 8959, formerly contract agent for the Winnipeg Electric Company, Winnipeg, Can., has been appointed industrial power representative for the Public Service Electric Company, in the Jersey City district. His headquarters are at 148 Summit Avenue, Jersey City, N. J.

* * * *

H. C. Hoagland, Po. 13903, who has had charge of the H. M. Byllesby & Company plants at Muskogee, El Reno and Oklahoma City for the past six months, has been transferred from Muskogee to Oklahoma City, and made vice-president and general manager of the Central Oklahoma Light & Power Company.

* * * *

J. J. Milligan, Po. 11672, formerly salesman for the Commercial Electrical Supply Company, St. Louis, Mo., recently resigned his position with that company to accept a position as salesman with the Chance Manufacturing Company, Centralia, Mo. Jovian Milligan will continue to make his home in St. Louis.

* * * *

W. A. ReQua, Po. 1277, president of the ReQua Electrical Supply Company, Inc., Rochester, N. Y., announces the removal of his firm to new and larger quarters at Nos. 95 and 97 Paul Street. Jovian ReQua has been located at 114 Paul Street for the past two years, during which time his firm has outgrown its quarters.

* * * *

Chas. E. Foster, Po. 13851, secretary and treasurer of the St. Joseph (Mo.) Railway, Light, Heat & Power Company, has been appointed comptroller of the Crew-Levick Oil Company of Philadelphia. Both companies belong to Henry L. Doherty & Company interests. Jovian Foster was the first president of the Jovian League of St. Joseph.

* * * *

H. C. Hoagland, Po. 13903, recently resigned his position as general manager of the Muskogee (Okla.) Electric Company to accept the position of vice-president and general manager of the Central Oklahoma Light & Power Company. His headquarters are at the general offices of the company, 1116-17 State National Bank Building, Oklahoma City.

WASHINGTON DEVEREUX, Po. 2367V, chief of the electrical department of the Philadelphia Fire Underwriters' Association, who has been elected president of the National Association of Electrical Inspectors. Jovian Devereux has been engaged in the electrical industry since 1880. In that year he entered the service of the Bell Telephone Company. He has been identified with the Philadelphia Fire Underwriters' Association for twenty-eight years and is one of the best known electrical inspectors in the country. He is the originator of the Electrical Conference, which meets once a month, and comprises inspectors and district managers of the Philadelphia Electric Company, municipal inspectors, electrical contractors and mechanics and inspectors of the Philadelphia Fire Underwriters' Association. Jovian Devereux is the author of "The Electrical Key," which is the standard booklet used by the Electrical Inspection Bureau. He is a member of a number of electrical clubs and organizations, in all of which he has taken a prominent part. Since his Rejuvenation at Philadelphia in October, 1909, he has been an enthusiastic Jovian and has rendered valuable service to the Fraternity.

A. C. Jordan, Po. 2050, has been appointed commercial manager of the Cumberland County Power & Light Company, Portland, Me. He was formerly connected with the Westinghouse Electric & Manufacturing Company at Pittsburgh, Pa., and engaged in central station work at Elmira, N. Y. He has been with the Portland company two years and has had charge of power sales.

* * * *

Fred A. Otto, Po. 6085, until recently connected with the St. Paul (Minn.) Gas Light Company, as superintendent of the electrical department, is now general manager of the Minnesota Gas & Electric Company of Albert Lea, Minn. Jovian Otto was recently elected president of the Minnesota Electrical Association. He has been secretary of the association for the past four years.

* * * *

W. C. Harrington, Po. 5623, president of the Harrington Electric Company, 411-13 Caxton Building, Cleveland, Ohio, announces the purchase by his firm, the Harrington Electric Company, of the Warner Electric Company of 331 Frankfort Avenue. Jovian Harrington's firm has taken over the entire equipment of the Warner Company, and will continue its business specialty of old house wiring.

* * * *

Peter Junkersfeld, Po. 10936, assistant to the vice-president, Commonwealth Edison Company, Chicago, has been commissioned a major in the Engineers' Officers Reserve Corps, U. S. Army. He

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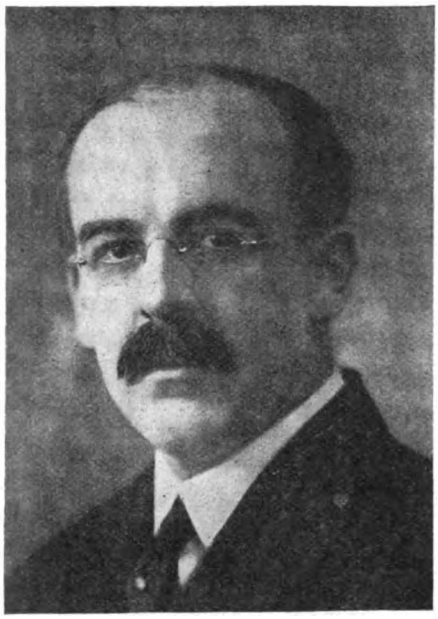

W. E. ROBERTSON, Po. 424-6V, Past Jupiter Six, president, Republic Electric Company, and general manager, Robertson-Cataract Electric Company, Cleveland, has been elected chairman of the Atlantic Division of the Electric Supply Jobbers' Association. Jovian Robertson has taken an active part in electric organization work for years. In addition to rendering valuable service to the Jovian Order, he was one of the founders of the Society for Electric Development, of which he is vice-president.

has been appointed to the examining board for the Chicago-Milwaukee district. That board will consider applications of technically trained men for enlistment in the corps, which is a volunteer branch of the army.

* * * *

ROBERT J. CLARK, Po. 3431, recently in charge of the meter department of the Sacramento (Cal.) District of the Great Western Power Company has been transferred to the general meter department of that company at San Francisco, and made foreman of their shop at that point.

* * * *

CHAS. F. HEMENWAY, Po. 8830, of the Smith & Hemenway Co., Inc., formerly located at 99 Chambers street, New York City, announces the recent removal of the executive offices of his firm to 130 Coit street, Irvington, N. J. This is where the factory of the firm is located. Only a small sales office devoted to New York City and export trade will be maintained in New York, at 261 Broadway.

* * * *

FRED. G. DUSTIN, Po. 7811, and CHAS. W. ARRICK, Po. 7806, proprietors of the Standard Electric Company, Minneapolis, have been joined in business by EMIL ANDERSON, Po. 7805, and have formed an incorporation known as the Standard Electric Service Company. The corporation assumes the liabilities, takes over the business of the old company, and will continue at the same location, 239 Plymouth Building.

* * * *

B. F. LYONS, Po. 2668, was elected president of the Wisconsin Electrical Association at its ninth annual convention in Milwaukee, March 14 and 15. He was also elected president of the Wisconsin Gas Association at the annual convention of that association, which just preceded the electrical association convention. Jovian Lyons enjoys the distinction of being the first man to head both organizations at the same time.

* * * *

L. S. MONTGOMERY, Po. 2711, Eleventh Apollo, who until recently was in service at the Texas border, has joined the sales organization of the American Conduit Manufacturing Company of Pittsburgh. His headquarters will be at the company's office in New York City. Prior to his service on the border, Jovian Montgomery was manager of the Buffalo office of the National Metal Moulding Company of Pittsburgh.

* * * *

STANLEY STOKES, Po. 15768, formerly sales engineer for the Electric Company of Missouri, Webster Groves, Mo., has been appointed general superintendent of the Jefferson division of the Union Electric Light & Power Company. The division at present includes the towns of Festus, DeSoto, Perryville and the unincorporated territory in Jefferson and Perry Counties. Jovian Stokes will probably make his headquarters at Festus, Mo.

* * * *

PAUL M. LINCOLN, Po. 5026V, commercial engineer, Westinghouse Electric & Manufacturing Company, East Pittsburgh, was recently appointed a captain of the Engineering Corps, U. S. Army. It will be gratifying to the fraternity to note that Jovian Lincoln has been included among those selected by President Wilson to make up the Engineering Corps, which will take an important part in war plans. His knowledge and experience will be a valuable asset to that division of the army.

* * * *

F. BURT FENTOM, Po. 18446, has recently severed his connection with the W. S. Barstow & Company, Inc., with which he was identified as publicity manager. Jovian Fenton had been connected with the Barstow Company for two years. He attracted a great deal of attention by the good-will advertising campaigns he conducted for the Sandusky (Ohio) Gas & Electric Company. At the annual convention of the Ohio Electric Light Association in 1916 he read two valuable papers, one dealing with public relations in general, and one with municipal ownership. The JOVIAN has not been advised of his plans for the future.

* * * *

HENRY F. HOLLAND, Po. 1446, who, as stated in the January issue of The JOVIAN, was made manager of the electric range department of the Great Western Power Company of San Francisco, has returned to Los Angeles, following the inauguration of a policy to curtail the activities of the range department by the Great Western Company. Jovian Holland has not decided upon an affiliation at the time of going to press. His wide acquaintance and experience in the electrical field make his service valuable and he will add strength to the firm or organization with which he becomes affiliated. He is at present at 1928 Highland Avenue, Hollywood, Cal.

* * * *

GEORGE CARL VENNUM, Po. 9089, who has been connected with the engineering department of the Union Electric Light & Power Company of St. Louis for the past twelve years, has resigned to accept the position as chief engineer with the Douglas Company, Cedar Rapids, Iowa. Jovian Vennum was born at Martins Ferry, Ohio, and is a graduate in mechanical engineering of the State University of Ohio. He is a member of the American Society of Mechanical Engineers. His service with the engineering department of the Union Electric Light & Power Company has contributed a great deal to place it at the high point of efficiency at which it stands today.

* * * *

C. W. FORBRICH, Po. 10162, western manager of the Electrical Review and Western Electrician, has resigned his position with that publication to enter the advertising field on his own account. He intends to put into practice a plan he has had under consideration for some time. Jovian Forbrich has been connected with the Review since 1908. Previous to the consolidation of the two magazines he was connected with the Western Electrician, having filled various positions from that of office boy to secretary and treasurer, with the latter publication. He will be associated with J. H. Burton in his new venture which will be the Forbrich-Burton Advertising Service, Inc., Monadnock Block, Chicago.

* * * *

Use your difficulties. Many men owe the grandeur of their lives to their tremendous difficulties.—Spurgeon.

* * * *

Lend a hand. The men who are lifting the world upward and onward are those who encourage more than criticise.—Elizabeth Harrison.

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NEW ORLEANS REJUVENATION AND BANQUET

NEW ORLEANS Jovians held an exceptionally pleasant Rejuvenation and Joviation on the evening of March 31, an account of which is given on another page of this issue of the magazine. Activity in Jovian affairs in the southern metropolis is growing in a promising manner. The League is accomplishing things of value to the industry and has plans outlined covering several important movements to be inaugurated in the future.

At the top is a picture of the banquet; at the bottom, the Degree Team and other members.

Reading from left to right, lower picture, top row: J. C. A. Conery, Po. 2559; H. N. Parsons, Po. 8285; H. C. Vesy, Po. 1792; W. E. Clement, Po. 2557, Statesman for Louisiana; Col. Jos. H. DeGrange, Po. 9192; W. A. Porteous, Po. 9226, Second Tribune; Robley S. Stearnes, Po. 1501, Thirteenth Apollo; Wm. J. Aicklen, Jr., Po. 5666, First Tribune; Robert F. Spangenberg, Po. 1500; J. W. Flynn, Po. 3921; H. M. Muller, Po. 18508, and John A. Sarre, Po. 18510.

Seated: Louis Rose, Po. 9231; J. R. Stebbins, E. R. Burges, J. J. Schwenk (candidates); S. Emanuel, Jr., Po. 18500V; J. R. Bannahan, A. Battle (candidates), and Gabriel Correjolles, Po. 3920.

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REPORT OF MEETING OF SPECIAL COMMISSION

The meeting of the Special Commission appointed by Jupiter Doherty, together with three members of the Fifteenth Jovian Congress and representatives of Jovian leagues, was held in the club rooms of the Cleveland Electrical League, April 3rd and 4th.

Following two entire days' discussion, during which every representative was given full opportunity to state his views, the following resolutions were adopted:

"First: The chief function of The Jovian Order shall be that of an international association of Jovian Leagues.

"Second: The organization shall retain its present status of an international, semi-fraternal, goodfellowship, constructive, development body, and shall be made up of a large membership representative of the personnel engaged in the electrical industry; it shall perform the definite function of guiding and co-ordinating the activities of local leagues; it shall perform its major development work, its general activities, through these established leagues.

"Third: In the performance of these functions, it is deemed necessary that the following procedure shall be carried out:

"A. The appointment by Congress of an executive committee of not more than six, to have charge of an promote the major activities of the Order. Each member of this committee shall be detailed certain specific duties: For example: Insurance; Membership; Convention; Employment; Publication; Educational and Development; Other Relations. Jupiter shall act as Chairman, and Mercury as Secretary of the Executive Committee. Jupiter shall be directly in charge of Other Relations.

"B. It is believed that membership in The Jovian Order should be through membership in a local league, but provision should now obtain to care for the individual becoming a Jovian prior to the adoption of these recommendations and who does not or may not belong to a local league. And further, that provision shall also obtain in leagues to care for the desirable or essential, local electrical members, prior to the adoption of these recommendations, who do not or may not join The Jovian Order.

"C. It is believed that the Constitution should be changed providing that all candidates for Jovian membership shall be accepted by The Jovian Order only through the process of joining a Jovian chartered League; and that all men who join chartered Jovian Leagues shall thereby automatically become members of The Jovian Order.

"D. The present congressional districts shall obtain as today constituted. Congressman and Statesmen shall be elected by the Jovians in their respective districts, and not by the membership at large. Said election shall take place prior to the first day of the month in which the annual meeting is held, and the term of office shall begin with the day following the adjournment of the annual meeting.

"E. It shall be the duty of Congress to hold not less than two meetings per year; the first to be held on the first day of their term of office.

"F. It is believed that the present method of voting for officers and constitutional amendments should be changed for the better. The following method is suggested:

"A quorum shall consist of those members present, either in person or by proxy, following a call for a special or annual meeting made in accordance with the Constitution. It shall be provided, however, that no one delegate shall be permitted to vote more than nine proxies.

"G. It is our belief that in the present day development and enlargement of the Order that some of the powers delegated to the Past Jupiters' Association in the Order's early history are now unnecessary to safeguard action taken by the Order. It is suggested that this be called to the attention of the Past Jupiters' Association for early recommendation of change."

The Commission requested that these resolutions be submitted to Congress through Reigning Jupiter Doherty, and that he call a meeting of Congress at the earliest possible moment to act upon the Commission's recommendations. In the event Congress deems the matters submitted to it of sufficient importance to require immediate action, it is requested that they call a special meeting of the Jovian Order at the earliest date practicable, to take the necessary legislative action to put these recommendations into effect.

The Jovian Congress is now being canvassed to ascertain the earliest possible date when a majority can attend.

There were in attendance as representatives of Congress:

James R. Pollock, Po. 18675, New York City.
Wm. Gloeckner, Po. 2370V, Philadelphia.
W. J. Trott, Po. 2685, Grand Rapids.

Special Commissioners present were:

Ell C. Bennett, Po. 3932-13V, Chairman, St. Louis.
Joseph Insull, Po. 16726, Pittsfield.
A. J. Binz, Po. 1921V, Houston.
Henry Harris, Po. 2888-48V, Pittsburgh.
W. P Holcombe, Po. 901V, Cincinnati.
N. H. Boynton, Po. 5604V, Cleveland.
Earnest McCleary, Po. 7314V, Detroit.
Fred P. Vose, Po. 1877, Chicago.

The following Jovians represented their leagues in person:

K. G. Rennie, Po. 1860, Kansas City, Mo.
Robert Montgomery, Po. 6147, Louisville, Ky.
Arthur G. Pierce, Po. 2896, Pittsburgh, Pa.
J. O. Roser, Po. 10412, Pittsfield, Mass.
Gurth Williams, Po. 6849, Eau Claire, Wis.
V. W. Shear, Po. 14399, Akron, Ohio.
G. T. Marchmont, Po. 4475, Richmond, Va.
Thos. J. Creaghead, Po. 3013, Cincinnati, Ohio.
A. C. Beattie, Po. 1823, Cincinnati, Ohio.
O. B. Marsh, Po. 17718, Cincinnati, Ohio.
B. M. Downs, Po. 2508, Cincinnati, Ohio.
R. S. Ingle, Po. 7277, Cleveland, Ohio
R. S. Dunning, Po. 16471, Cleveland, Ohio.
H. S. Greene, Po. 474-2, Cleveland, Ohio.
H. C. Turnock, Po. 5658V, Cleveland, Ohio.
J. M. Bateman, Po. 2610V, Cleveland, Ohio.

A number of communications were read from other Leagues unable to send representatives to the meeting.

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SAN ANTONIO ELECTRICAL FIRM REORGANIZES

HARRY G. WHARTON, Po. 6653, and J. C. Kirkwood, formerly officers in the firm of W. G. Schuwirth & Company, of San Antonio, have purchased all other interests in the company, and have reorganized it with the title of Kirkwood & Wharton.

Jovian Wharton has been one of the most active workers in the electrical development work of the Jovian Order in the Southwest. He served as First Tribune in San Antonio for several years, and was largely instrumental in the consistent growth of the membership of the Order in that city.

Only recently, during the period of reorganization of the San Antonio League, Jovian Wharton entertained some fifty electrical men of his city at a get-together dinner.

He has a host of friends in the electrical business, and it is freely predicted that the new organization will meet with success.

* * * *

STRONGER MEN.

O do not pray for easy lives. Pray to be stronger men. Do not pray for tasks equal to your powers. Pray for powers equal to your tasks. Then the doing of your work shall be no miracle. But you shall be a mircale. Every day you shall wonder at yourself, at the richness of life which has come to you by the grace of God.—Phillips Brooks.

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NEWS OF JOVIAN LEAGUES

Tulsa, Okla. Tulsa Chartered Jovian League, No. 8, has been very active in the last few weeks. Not only has the League been organized and a charter obtained but the activity of its members is manifesting itself in a number of ways. Regular weekly luncheon meetings are now being held, the Degree Team is practicing regularly and the members are making a drive to bring their total membership up to fifty.

As mentioned on another page, fourteen members were Rejuvenated on March 21. Prior to that time, there were but eleven members in Tulsa. The gain was over one hundred per cent, and as there are something over fifty desirable men in Tulsa from which to select material, another one hundred per cent increase will bring the league to its goal.

A photograph of the Joviation banquet held in connection with the recent Rejuvenation shows the patriotic spirit that prevailed.

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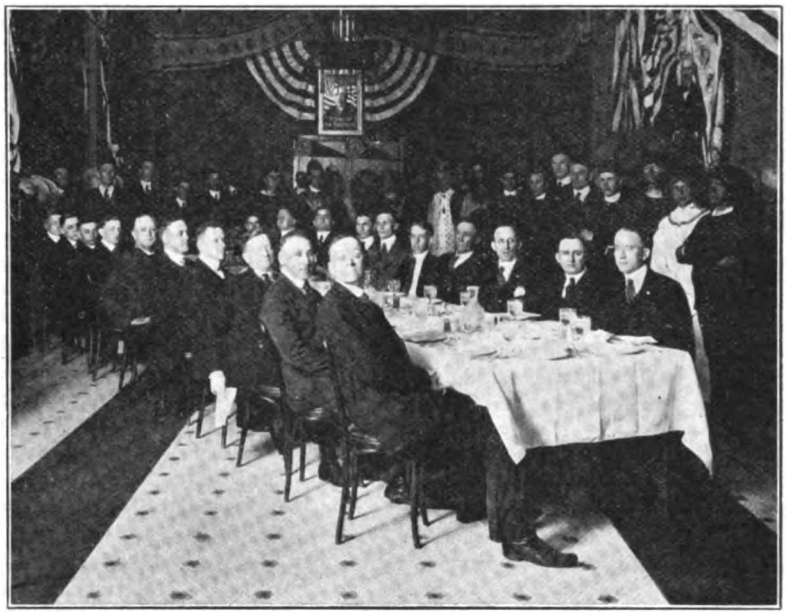
Kansas City A. Penn Denton, Po. 1415V, presided at the meeting of the Kansas City League at the Hotel Sexton March 30. E. E. Stigall, Po. 9588, distributed the new city rules, governing pedestrian traffic.

An invitation to all members of the League to be present at the meeting of the Southwestern Bell Telephone Society April 9 was read.

F. B. Uhrig, Po. 1434, who attended the recent meeting of the Presidents' Round Table as proxy for P. Lloyd Lewis, Po. 6018V, briefly discussed the matter of subscribing $100 as the Jovian League fund to be used for the entertainment of the city planning convention, which will be held in Kansas City some time during the summer.

A letter of appreciation was authorized by a vote to be sent the Atlanta League, commending the services of Paul M. Potter, Po. 5447V, who recently moved from Kansas City to Atlanta.



Tulsa (Oklahoma) Joviation, where the Spirit of Patriotism and Jovianism were very much in evidence

After the regular business, the meeting was turned over to Herman F. Lang, Po. 842, who officiated as toastmaster. He introduced R. Bryson Jones, as speaker of the day. Mr. Jones made an interesting address on "National Preparedness."

At the meeting March 16, P. Lloyd Lewis, Po. 6018V, presided. Rev. Francis M. Orr addressed the meeting. His subject was "Ireland."

Kenneth G. Rennie, Po. 1860, was chosen as the League's representative to attend the Jovian conference at Cleveland.

* * * *

Cincinnati The Cincinnati Chartered Jovian League No. 1, held an unusually interesting meeting March 16. There was a large attendance. Ex-Congressman Stanley Bowdle was speaker of the occasion and addressed the meeting on the "Merchant Marine." He was a member of the commission of Marine and Fisheries, and made an interesting address.

General discussions of proposed activities of the League were indulged in by the members at the Luncheon meeting March 19 at the Hotel McAlpin. Thirty-five members were in attendance.

A report was made of the illness of Frank Warren, Po. 9, Second Neptune, who recently suffered a stroke of paralysis. It was stated he had improved a great deal since the attack and was on the road to recovery.

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Winnipeg At the Luncheon meeting of the Winnipeg League, March 8, W. F. Minty, Po. 15960, was slected secretary to succeed W. M. Houston, Po. 5995, who resigned owing to business necesitating his being absent from the city a great deal during the summer.

After the discussion of other business of the League, the speaker, Dr. Magill, secretary of the Winnipeg Grain exchange was introduced. In a most interesting manner he described exactly what the Grain Exchange was doing, and of what importance it was in the business life of Western Canada.

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La Crosse, Wis. Plans for a Rejuvenation to be held April 19, were completed at the regular luncheon meeting of the La Crosse League at the Elks Club April 7. P. R. Linker, Po. 14302, First Tribune, presided as chairman of the meeting.

Announcement was made that the League would hold regular meetings from that time, on the first Thursday in each month at the Elks Club. The meetings will be held in the form of six o'clock dinners.

* * * *

Mansfield, Ohio

The principal topic of discussion was that of plans and arrangements for the coming Rejuvenation at the Mansfield luncheon meeting of March 30. The date of the Rejuvenation was fixed for April 13.

W. O. Custer, Po. 6246, Second Tribune, presided as chairman of the meeting.

J. F. Sells, Po. 8797, of the National X-Ray Company of Cleveland was a visitor of the League.

* * * *

Minneapolis An exceedingly successful meeting was held by the Minneapolis Chartered Jovian League No. 4, on the evening of April 12, at the Main Engineering Building of the University of Minnesota.

About 300 members and visitors were present and enjoyed a program, which included addresses, moving pictures, instrumental and vocal selections, and patriotic songs in which all of the attendance joined.

O. Curtis, Po. 11830, president of the League, presided as toastmaster and opened the meeting with a short address.

Ell C. Bennett, Po. 3932-13V, Mercury, was the principal speaker. The subject of his address was "Jovianism." In his talk he covered phases of the constructive work of the Order and its plans for the future.

H. J. Meyer, Po. 7365, chairman of the Educational Committee of the League made an interesting address on "The Future of the Minneapolis Jovian League."

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Much commendation is due the officers and various committess of the League for the valuable service being rendered to the industry and the great progress now being made.

The chairmen of the committees who form the general committee are as follows: O. Curtis, Po. 11830, Executive; H. J. Meyer, Po. 7365, Educational; W. H. Vilett, Po. 3675V, Dramatic; R. J. Courtney, Athletic; W. E. Stephenson, Po. 690, Finance; E. M. Conant, Po. 16200V, Entertainment; R. M. Laird, Po. 5164, Music; Paul Joyslin, Po. 1264, Development; R. M. Rutherford, Po. 6094, Publicity; Chas. Hotchkiss, Po. 9194, House; H. S. Davis, Po. 9141, Reception and F. W. Findley, Po. 3667V, Membership.

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Dallas, Texas Chas. Saville, director of Public Health and Welfare of the city of Dallas addressed the Dallas Electric Club and Jovian League at the regular luncheon meeting March 21 at the Hotel Adolphus. Benj. K. Howard, Po. 1231, president of the League presided as chairman. There were fifty-six members in attendance.

Among the new movements discussed was the "Franchise Question," which was presented for consideration by R. S. Wakefield, Po. 2606, First Tribune. By unanimous vote the members of the League declared themselves in favor of the adoption of the franchise. Since then a large affirmative vote has been polled by the city at a recent election. The franchises include the lighting, traction and telephone contracts of the city.

Dan'l. G. Fisher, Po. 2173, chairman of the Float Committee was extended a hearty vote of thanks and appreciated by the League for the electric float he had prepared and entered in the Spring Style Show parade. The float was the most beautiful one in the parade.

At the meeting of April 2, H. H. Russell, Po. 2529, commercial heating engineer, Texas Power & Light Company, delivered an educational address on the "Electric Range." He gave a comprehensive outline of its many values to the housewife.

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Denver, Colo. The Denver League had an unusually interesting meeting at the Kaiserhoff Hotel April 11. A. F. Traver, Po. 2354, presided as chairman and introduced as speaker Bishop McConnell, of the Methodist Episcopal Diocese of Denver, who is also in charge of the affairs of his church in Northern and Central Mexico.

In outlining conditions in Mexico, Bishop McConnell stated that he did not believe there was any likelihood of hostilities developing between the United States and the Government of Mexico. He believes the bandit element is the only menace to our border. These bandit bands, he stated, will do anything for food or money and will have to be watched closely.

In commenting on Villa he stated that he believed the bandit chief was losing his power.

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New Orleans Mayor Behrman was the principal speaker at the luncheon meeting of New Orleans League March 20. Taking for his subject "Reformers Without Remedies," he described the detriment of captious criticism, which he attributed to ignorance. The mayor then outlined what the city had done in improvements and what its plans for the future were. He predicted that within a few months New Orleans would have one of the best lighting systems in the country.

W. J. Aicklen, Po. 5666, First Tribune, presided as chairman of the meeting.

About sixty members of the League were in attendance.

* * * *

Battle Creek, Mich. The fortnightly dinner meeting of the Battle Creek, Mich., Jovian League, March 21, was held at Post Tavern. Twenty-one members attended.

J. Frank Raynes, Po. 13965, First Tribune, presided as chairman.

The pricniapl speaker was Joseph L. Hooper, a prominent attorney, whose subject was "Efficiency Wins."

Arrangements were completed for the Rejuvenation to be held April 3.

Among the prominent visitors present were: John J. Kenny, Po. 10939, of the General Electric Company, Kalamazoo, and Edward F. Rhod, Po. 8958, of C. J. Litscher Electric Company, Grand Rapids.

* * * *

Oklahoma City The regular luncheon meeting of Oklahoma City, Chartered Jovian League No. 16, April 8, was held at the Lee Huckens Hotel. George W. Knox, Po. 18851, presided as chairman.

D. E. Nims, Po. 3844, was elected vice-chairman to succeed R. D. Sheldon, Po. 18856, who resigned.

J. W. Gerard, Po. 16582, was appointed assistant secretary of the League.

The luncheon meetings of the League will he held regularly on Mondays, at 12:15 p. m. at the Lee Huckens Hotel.

* * * *

Cleveland Paul M. Lincoln, Po. 5026V, commercial engineer, Westinghouse Electric & Manufacturing Co., East Pittsburgh, addressed the luncheon meeting March 15. His subject was: "The Extent to which Electricity has Entered into Our Mordern Life."

George S. Vail presided as chairman of the meeting.

C. D. Folsom was reported to be seriously ill with pneumonia at his home, East 115th street.

P. B. Zimmerman, Po. 7305V, announced the advent of a seven pound son at his house. Dr. V. C. Rowlands announced the advent of two sons.

March 22, Judge Carl D. Friebolin, addressed the League. His subject, "How our Laws are Made," was handled in an able manner.

J. S. Hurd was chairman of the meeting.

At the meeting of March 29, Isabel Simeral, secretary of the Women's City Club, addressed the League on "Women and War." The event was made Ladies' Day and about one hundred ladies attended.

Norman Anderson, Po. 19044, officiated as chairman.

M. H. Moffett, Po. 2935V, Fifth Triton, presented the League with a large American flag in commemoration of its first anniversary.

Frederick P. Vose, Po. 1877, secretary of the National Creditmen's Association of Chicago, gave an interesting talk April 5, on "Self Control."

L. P. Sawyer, Po. 193, presided as chairman.

* * * *

Los Angeles Judge Paul J. McCormick, of the Supeiror Court of Los Angeles County addressed the League March 14. His topic was "Fraternalism."

C. G. Pyle, Po. 1308, who was recently elected Exalted Ruler of the Elks, presided as chairman.

March 21 was Red Cross day. R. H. Ballard, Po. 14214, presided as chairman, and introduced as speaker, Martha Nelson McCan, whose address was "The Purpose of the American Red Cross."

Patriotic selections were sung by Miss Eleanor Kent, a well-known operatic star.

Three ten-minute talks were enjoyed March 28. Chas. F. Hutchins, Colonel Seventh California National Guard, spoke on "Military Possibilities in Los Angeles." Harry B. Light, Colonel of Artillery Reserves, took for his topic: "Fort MacArthur," and Watt L. Moreland, general manager, Moreland Truck Company, addressed the League on "Highways and Motor Vehicles in Pacific Coast Defense."

It was announced that the Jovian League would procure 1000 members to the American Red Cross as its quota.

Dr. Charles W. Decker, major Medical Corps, N. G. U. S. and president of the National Guards Association of Southern California, presided as chairman of the meeting.

Thomas Lee Woolwine, district attorney for the County of Los Angeles, was the speaker April 4. He took for his subject "The District Attorney's Office."

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Harry G. Holabird, Po. 19466, of the Holabird Electric Company officiated as chairman.

April 11 was Ladies' Day. Albert Shields, superintendent of Public Schools, Los Angeles, addressed the meeting on "What Our Schools are Trying to Do."

J. H. Cunningham, presided as chairman.

* * * *

Chicago March 22, Hon. Saburo Kurusa, Consol of the Imperial Japanese Government addressed the League. Mr. Kurusa who has represented the Japanese Government in the United States for the past four years, showed how the cordial relations existing between the two governments were mutually beneficial.

The occasion was also Ladies' Day, and the presence of the ladies added greatly to the success of the meeting.

H. A. Porter, Po. 1244, presided as chairman and introduced the speaker.

Jas. B. Wootan, managing editor of Public Service Magazine, was the speaker March 29. His address "Some Aspects of Municipal Ownership," contained much food for serious thought.

Harry A. Porter, Po. 1244, was appointed chairman of the Permanent Quarters Committee.

March 29, the speaker was Dr. Preston Bradley, of Evanston. His topic was "What America Expects of Americans."

Announcement was made of an invitation extended to the League by the Chicago Telephone Company to be its guest April 12 at the Company's restaurant.

* * * *

New York Wednesday, April 11, Dr. Talcott Williams, Dean of the Columbia School of Journalism, addressed the League. Among the numerous interesting features of his address were logical deductions as to how the war will affect business; what is to happen to our local and foreign trade, and what benefits we may hope for as a result of our participation.

At the conclusion of his address a resolution of thanks introduced by J. M. Wakeman, Po. 524, Fifth Apollo, was tendered the speaker.

Arthur Williams, Po. 1917, president of the League presided.

Since the luncheons have been held in Lower Manhattan, the attendance has doubled. To this and the interesting speakers it has had the League owes its increasing enthusiasm.

* * * *

St. Louis March 20 was Wagner Electric Company Day at the St. Louis Jovian League meeting, and brought out an overflow crowd.

V. A. Fynn, consulting engineer, Wagner Electric Manufacturing Company, who has spent twenty-nine seasons in the Alps, and has established an International reputation as a mountain climber, gave an illustrated lecture entitled "Experiences in Climbing Above the Skyline." He showed some very rare scenes of the Alps.

Walter Robbins, Po. 1169V, assistant general manager, Wagner Electric Manufacturing Company, presided as chairman.

The Century Electric Company had charge of the meeting of March 29.

D. S. Kramer, Po. 6071, manager Export Department of that company, addressed the League on: "Electrical Conditions Abroad." Jovian Kramer, who has traveled in every civilized country of the globe for his company during the past few years gave some valuable information on export matters, and electrical conditions in various countries.

R. J. Russell, Po. 909V, secretary of the company, presided as chairman.

April 3 was a day of patriotic demonstration.

Major C. E. Stodter, U. S. Army, was the speaker, addressing the meeting on, "The Military Policy of the United States." He clearly defined the need for military training, by showing how the country has suffered by the lack of trained men in the wars of the past.

Gen. E. J. Spencer, Po. 9079, officiated as chairman.

Judge Seldon P. Spencer, prominent St. Louis attorney and noted jurist addressed the meeting April 10. In his address, "Universal Military Service," he clearly showed the need of the country for military training, and advocated the adoption of the system at present in operation in Switzerland.

* * * *

Akron, Ohio The Akron Jovian League held an enthusiastic meeting at Young's Hotel on the evening of March 22. About thirty-five members were present. The banquet was an excellent one.

First Tribune, W. E. Salber, Po. 14397, presided as chairman, and gave a short talk on Jovian and League affairs in general. He also made a report of the meeting which he attended at Cleveland some time ago. He then called for an expression of the views of the members in regard to reorganizing the local League.

At the conclusion of the discussion First Tribune Salber was appointed one of the committee of three to represent the Akron League, at the committee conference to be held at Cleveland April 3. The other members of the committee appointed were: V. W. Shear, Po. 14399 and W. G. Palmer, Po. 14391.

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'Tis looking down that makes one dizzy.—Browning.

* * * *

Time is money. Welcome is that visitor who appreciates the value of another's time.

JOVIANS LOOK!

THE Jovian Constitution provides that a ballot be published here on which each Jovian may indicate his preference as to any individual for any elective office. The ballots are to be handed to the Nominating Committee for their information and guidance. Fill it out and mail to

THE JOVIAN ORDER

SYNDICATE TRUST BLDG. ST. LOUIS

THE JOVIAN ORDER
SYNDICATE TRUST BLDG.,
ST. LOUIS

My preference for (state name of office)

.....

for the next administration is.....

.....Po.....

(Sign here)

.....Po.....

City..... State.....

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MARCH REJUVENATION

TOLEDO, OHIO

FIFTY members of the Order were present to participate in the Rejuvenation held at the Builders' Exchange, Toledo, Ohio, on the evening of March 3.

First Tribune Marvin W. Hansen, Po. 6121, had twenty-two candidates on hand ready to be initiated.

The Rejuvenation was preceded by a banquet at which Fred Bissell, Po. 529, presided as chairman.

The following speakers were introduced and made interesting talks: Mark S. Walker, Po. 2283, spoke on "Co-operation"; Frank M. Knierim, Po. 2274, on "Efficiency"; Marvin W. Hansen, Po. 6121, on "Unity," and Harry R. Fowler, Po. 7764, on "Jovianism."

Among the visitors present was R. J. Kennedy, Po. 4921, of New York.

The modified form of the initiation ceremony was used.

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TULSA, OKLAHOMA

TULSA Jovians held a very successful Rejuvenation at Musicians' Hall on the evening of March 21. First Tribune E. A. Wilcox, Po. 6830, provided fourteen candidates to be submitted to the test of Mount Olympus.

The Joviation that followed was held at the Ketchum Hotel. Galen Crow, Po. 925V, Statesman-at-Large, presided as chairman.

The speakers were P. Lloyd Lewis, Po. 6018V, Kansas City, and F. W. Insull, Po. 10495.

Music for the occasion was furnished by the Jovian Glee Club.

The following Degree Team conferred the initiation ceremony: L. G. Purtee, Po. 2237, Jupiter; C. D. Russell, Po. 18855, Neptune; K. L. Sackhouse, Po. 19588, Pluto; H. Hunt, Po. 19584, Vulcan; J. B. Lear, Po. 15849, Mercury; P. Lloyd Lewis, Po. 6018V, Hercules; A. B. Dugger, Po. 19581, Mars; J. M. Kinslow, Po. 16770, Apollo; H. D. Jenkins, Po. 19585, Avrenim, and P. G. Walker, Po. 6871, J. E. Bell, Po. 19579, R. M. Griffith, Po. 19583, and H. M. Bates, Po. 1919, Imps.

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NEW YORK

THIRTY candidates were initiated at the Rejuvenation held in New York on the evening of March 9. About 130 members were present, and were very much impressed with the dignity of the ceremony, which was entirely devoid of floor work.

A number of the members expressed themselves greatly in favor of limiting future initiation ceremonies to the serious program of the ritual. That the candidates subscribe to that thought is unquestioned.

J. M. Wakeman, Po. 524, Fifth Apollo, presided as chairman of the Joviation.

F. H. Leggett, Po. 9379, recently of San Francisco, and H. C. Heidrich, Po. 14439, were introduced as speakers and each made inspiring and encouraging talks on Jovianism.

The affair proved to be one of the most enjoyable ones held in recent years.

* * * *

BENTON HARBOR, MICHIGAN

TWENTY-SIX members of the Order congregated at Robinson Hall on the evening of March 13, to participate in the Rejuvenation held at Benton Harbor, Mich. First Tribune L. E. Cavanaugh, Po. 15526, presided. According to reports the members who deserve special mention for their assistance in making the affair a success are: R. E. Curtis, Po. 19050; C. L. Myers, Po. 15535, and Carl Frakes, Po. 15528.

The Joviation was held at Lion Cafe, and was presided over by L. E. Cavanaugh, Po. 15526, who introduced as speakers, W. J. Trott, Po. 2685, Fifteenth Triton, and Mark S. Walker, Po. 2283, of Toledo.

The following Degree Team conferred the ceremony: R. E. Curtis, Po. 19050, Jupiter; T. B. Daniell, Po. 19051, Neptune; C. A. Burchard, Po. 19049, Pluto; S. Kreitner, Po. 15532, Vulcan; C. O. Nichols, Po. 15537, Mercury; H. W. Quackenbush, Po. 19054, Hercules; C. L. Myers, Po. 15535, Mars; E. Paulson, Po. 17223, Apollo; C. M. Pool, Po. 19053, Avrenim, and Lloyd C. Shire, Po. 16521, and Elmer Linden, Po. 19052, Imps.

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NEW ORLEANS

NEW ORLEANS Jovians enjoyed an exceptionally good entertainment program and a number of interesting addresses at the Rejuvenation held in that city on the evening of March 31.

There were ten candidates present to receive the initiation, and thirty-six members to participate in conferring it.

First Tribune W. J. Aicklen, Jr., Po. 5666, officiated as toastmaster at the Joviation held at the Mouteteone Hotel in connection with the affair.

The speakers who responded to his call with interesting addresses were: Col. Jos. H. DeGrange, Po. 9192, and E. H. McFall, Po. 2720.

Among the prominent candidates were: Col. John P. Sullivan, Alfred Raymond, chief engineer, Sewer and Water Board, and Edward W. Burges, manager, New Orleans Southern & Grand Isle Ry.

The following members, from a report of their activities, deserve special mention: C. S. Barnes, Po. 1492V, Fourteenth Apollo; Robley S. Stearnes, Po. 1501, Thirteenth Apollo; E. H. McFall, Po. 2720; W. E. Clement, Po. 2557, Statesman for Louisiana; R. F. Spangenberg, Po. 1500, J. C. Conery, Po. 2559, and J. A. Sarre, Po. 18510.

Following is the personnel of the Degree Team: W. A. Porteous, Po. 9226, Jupiter; J. A. Sarre, Po. 18510, Neptune; R. F. Spangenberg, Po. 1500, Pluto; C. S. Barnes, Po. 1492V, Vulcan; W. N. Parsons, Po. 8285, Mercury; J. C. Conery, Po. 2559, Hercules; H. C. Vesy, Po. 1792, Mars; J. W. Flynn, Po. 3921, Apollo, and H. M. Muller, Po. 18508, Avrenim.

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ST. LOUIS

FIFTEEN candidates were initiated at the Rejuvenation held at the Mercantile Club, St. Louis, on the evening of March 29. Sixty-two members of the Order were in attendance. A good entertainment program had been arranged, consisting of orchestra, singing and vaudeville performances, which took up all of the time of the Joviation and no addresses were made.

C. E. Michel, Po. 9061, Second Tribune; E. H. Waddington, Po. 5176V, Statesman-at-Large; T. H. Bibber, Po. 158V, Twelfth Pluto; C. R. Croninger, Po. 9624V; E. C. Johnston, Po. 18535, and Jules A. Baker, Po. 18518, deserve special mention for their activities in contributing to the success of the affair.

First Tribune A. C. Cornell, Po. 5758, who has recently recovered from an accident, was in charge of the candidates and able to take his part as Avrenim on the Degree Team.

Following is the personnel of the Degree Team: B. H. Mann, Po. 16756, Jupiter; Claire W. Shands, Po. 15759, Neptune; J. P. Casey, Po. 790, Vulcan; Wm. A. LeMaster, Po 11657, Pluto; Chas. C. French, Po. 16281, Hercules; Wm. L. Rose, Po. 9069, Mars; F. C. Witte, Po. 11777, Mercury; J. E. Reid, Po. 11708, Apollo, and A. C. Cornell, Po. 5758, Avrenim.

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MANSFIELD, OHIO

FIRST TRIBUNE F. C. Poling, Po. 15317, assisted by W. O. Custer, Po. 6246, Second Tribune, of Mansfield, Ohio, held a modified Rejuvenation in that city March 30. There were two candidates, Jas. L. Stone, manager of the new business department, Mansfield Electric Light & Power Company, and Joseph Panott, representative of the Mansfield Electric Light & Power Company.

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This Rejuvenation was held as preliminary to that of April 13, at which time an enthusiastic Rejuvenation and Joviation was held.

An account of the latter event will be given in detail in the next issue of the magazine.

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CANTON, OHIO

THE REJUVENATION held by the Stark County Jovian League at the Hotel Courtland, Canton, Ohio, March 23, proved a success from every standpoint. There were twenty-four candidates to Rejuvenate and one hundred members of the Order were present to participate in the affair.

In addition to the local members there were visitors from Akron, Cleveland, Toledo and Warren. Prominent among them were J. M. Bateman, Po. 2610, First Tribune, Cleveland; and R. S. Dunning, Po. 16471, secretary of the League, of Cleveland.

O. A. Acuff, Po. 10590, First Tribune, presided as toastmaster of the banquet. He introduced as speakers J. M. Bateman, Po. 2610, whose subject was "Jovianism"; Mayor Chas. A. Strolberg, who delivered the address of welcome, and W. J. Rose, Po. 10595, who spoke on "The County League."

A subject that came in for a great deal of discussion was that of the movement in which the League is participating to light the Lincoln Highway through Stark County.

Both the Rejuvenation and Joviation were enjoyable affairs. The work of the Cleveland Degree Team under the direction of Captain Harry C. Turnock, Po. 5658V, was very impressive.

Following is the personnel of the team: Ray Kaufman, Po. 4822, Jupiter; R. J. Jones, Po. 5634, Mars; R. J. Harter, Po. 14375, Neptune; R. S. Dunning, Po. 16471, Pluto; H. L. Moyer, Po. 4386, Vulcan; J. F. Sells, Po. 8797, Apollo; R. S. Ingle, Po. 7277, Hercules, and Fred Godfrey, Po. 271, W. L. Smith, Po. 13114, J. J. Mulrain, Po. 14387, and Lawrence Geraix, Po. 15003, Imps.

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MILWAUKEE, WISCONSIN

ELEVEN candidates were initiated at the Rejuvenation held at the Republican House in Milwaukee March 15. Ninety members were present. The Rejuvenation was held in connection with the Wisconsin Electrical Association Convention.

The following prominent members were in attendance: E. W. Donoho, Po. 6049, Fifteenth Argus; W. R. Patton, Po. 1090, Fourteenth Argus; W. E. Bischoff, Po. 3190, Statesman-at-Large, and W. B. Crabtree, Po. 6155.

W. R. Patton, Po. 1090, presided as chairman of the Joviation.

R. M. Van Vleet, Po. 1094, Eighth and Ninth Mercury, made the principal address.

Those deserving special mention for their activities in the affair, according to reports, are: W. E. Bischoff, Po. 3190, A. H. Kieth, Po. 15369, F. Ziekursch, Po. 16625, and I. R. Douglass, Po. 1850.

Following is the Degree Team: Frank Ziekursh, Po. 16625, Jupiter; Carl Golin, Po. 12385, Neptune; J. W. Pfeifer, Po. 10981, Pluto; B. A. Bovee, Po. 16617, Vulcan; C. A. Steber, Po. 18369, Mercury; M. J. Schmitt, Po. 17018, Hercules; H. E. Brauns, Po. 16618, Mars; E. H. Eckstein, Po. 15984, Apollo, and A. L. Klug, Po. 7362, Avrenim. J. R. Douglas, Po. 18360, L. H. Marquardt, Po. 18365, and R. H. Smith, Po. 7203, Imps.

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A JOB FOR A VERSATILE MAN

According to a London paper, the Lady's Magazine for 1789 contained the following comprehensive advertisement:

"Wanted, for a sober family, a man of light weight who fears the Lord and can drive a pair of horses. He must occasionally wait at table, join in household prayer, look after horses, and read a chapter in the Bible. He must rise at seven in the morning, obey his master and mistress in all lawful commands, and if he can dress hair, sing psalms, and play cribbage, so much the better. Wages, 15 guineas a year."—Youth's Companion.

SOME OF THE BENEFITS YOU CAN HAVE FOR YOUR JOVIAN DUES!

(Paste this in your hat and be ready with these Jovian-Service-Rapid-Fire-Shots to nail the first sceptic who complains, or the fellow who sincerely wants to know.)

REMEMBER!

NOTHING IS USEFUL UNLESS IT IS USED!

(The Jovian Order places these benefits at your disposal, but it is not possible for the Order to FORCE you to use any or all of them. There should be one or more features here to interest EVERY man in the electrical industry. USE them!)

1. A hearty welcome in local leagues throughout the United States and Canada. If you travel on business or pleasure, particularly if you move your residence from one city to another, Jovian membership opens the door to quick and sure acquaintance with the men you should and desire to meet

2. A subscription to the Jovian magazine. A publication alive with interesting and instructive material.

3. A discount on accident insurance that more than equals the annual dues, to be offered to Jovians by June 1. Watch The JOVIAN and the electrical press for announcement.

4. Educational, correspondence courses in engineering, salesmanship and central station practice at approximately thirty per cent less than similar courses can be purchased elsewhere.

5. Free use of the services of a very successful Employment Bureau,—rapidly becoming the recognized clearing-house for men and positions in the electrical industry.

6. Promotion of electrical shows by free distribution of exact data on their organization and operation.

7. Maintenance of an International Speakers' Committee for the purpose of addressing business organizations and conventions on subjects of pertinence to the development of the electrical industry.

8. A Committee of Jovian Goodfellowship which relieves in a substantial manner many worthy electrical men who are in need of assistance.

9. Jovian Hotels—a chain of them—where Jovians receive a discount of ten per cent on lodging bills, and special courtesies. Many Jovians are saving in this manner much more than their Jovian dues.

10. Educating the public, through the activities of local Leagues, to a proper appreciation of the importance of the electrical industry; creating a realization of the necessity for the success of the local electrical industry—particularly the utilities—as an essential element in the growth and prosperity of any community.

11. Through the friendships and contact brought about by the local Leagues, eliminating local, internal discord among the several branches of the industry. Settling amicably and with greater profit to all concerned local policies and methods in merchandising. The accomplishment of the Order in this respect alone more than justifies it.

12. The opportunity to make an investment of time and energy in a movement that delivers to you and your business a profitable return.

13. Membership in the largest most militant electrical organization in the world.

14. An indispensable vehicle for the establishment of new local Leagues and the increase in usefulness to their members of all local chapters.

15. The building of an Endowment Fund that will eventually furnish financial sinews for any electrical trade development and goodfellowship labor the industry may need.

16. The personal satisfaction in knowing that you are joined with other progressive men of your industry in discharging the debt we all owe the profession that is furnishing us our livelihood and the world its greatest forwarding factor.

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

All For Old Glory

By W. R. J.

WE RAISE Old Glory in the breeze
and watch its graceful sway,
Well knowing every Jovian will
join us when we say:
The motto of our Order is the
word "Co-operate"
That means to pull together,
the lowly and the great;
And means that each and ev'ry one
in our fraternity
Has done his little bit or more
for electricity.
But down within the corridors
that wind around each heart,
There is a love for you, Old Flag,
forever set apart.
You represent to us a creed—the creed
of liberty,
And all that makes of earth a home
devoid of tyranny.
You represent a phase of life
the earth has struggled for
Through thraldom and oppression
of greed, and pride and war.
In fact you are the emblem of a nation
that desires
To live the life that God decrees
and that his word inspires.
You bear no malice, breed no hate
nor covet lands not yours;
You offer shelter to the poor
who seek your friendly shores.
But in your justice there is strength—
the strength of loyalty;
We offer you the best we have—
our whole fraternity!

* * * *

Practical Lessons in Agriculture

HOW TO RAISE A GARDEN

EVER since the advent of the human race into Old Mother Earth's scheme of things man has been identified with gardens to a large extent. Adam started life in a garden. He raised Cain and got kicked out, or got kicked out and raised Cain (which ever way it happened), and his posterity has been raising cain about gardens ever since. (The latter assertion may be taken either in a literal or figurative sense as it appeals to the reader).

Historically, gardens have always been held in good repute except in one instance. They were hanged in Babylon. (This one was discovered in the excavation of the city.)

To get down to the serious aspects of gardening, the garden proper may be classified under two heads, speculative and productive. The speculative garden forms a basis for imaginative production. It is flexible both in size and limitations. The estimation of its yield is incalculable; the variety, quality and proportion of its products are unlimited. It is unaffected by climatic, seasonable or industrial conditions. It requires no cultivation. Seeds are unnecessary. The crop may be harvested in any proportion or quality to suit the owner.

In fact the speculative garden forms the basis for an imaginative premise against which even our most accomplished fishermen can not hope to successfully contend. It can be operated far more constantly than either the occupation of hunting or fishing, which as a rule form but a periodical basis for fictitious narrative.

In almost every characteristic the productive garden is the exact opposite to the speculative garden.

On an average but one plant grows where a bushel of seed are planted. If a parsnip seed is planted one need not expect seven varieties of parsnips to spring from it. In fact if only one seed is planted it will be confiscated by the native inhabitants of the soil and nothing will spring up.

Nor is the danger to vegetable life entirely confined to the activities of insects that operate beneath the surface. Many an innocent and unsuspecting plant has stuck its head out of the ground to find a big husky cut-worm posing in a belligerent attitude above it, ready to do it to death the instant it begins to breathe.

From the standpoint of return for capital and energy expended, productive gardening averages approximately one-half of one per cent on the investment. This estimate does not include the devastating ravages of unneighborly chickens and sparrows.

Taking all opposing influences into consideration the following statement will be found of value, and may be used as a basis upon which to calculate the cost of promotion, overhead and operating expense, cost of machinery, equipment, labor, hazard and incidentals. The gross selling value of a crop raised on a garden plot, twenty-one feet and four inches wide by thirty-nine feet and eight inches long is accurately itemized.

Expenditures

Time (of owner) devoted to planning, seeking advice, reading agricultural journals, etc., 18 days, 7 hours, at 10 cents per hour	$18.70	
Subscription to three farm and agricultural journals	9.00	
Cost of expert labor (this includes the labor of boy employed 18 days to keep chickens off)	24.30	
Seeds and implements (four packages each, 97 varieties of seeds and 21 implements)	119.82	
Three hours work per day, 61 days (owner)	18.30	
One suit overalls (extra quality)	3.75	
Medicine for curing blisters	.90	
do do do sunburn	.65	
Doctor's prescriptions for curing lame back (3 at $1 each)	3.00	
Cost of medicine for same	4.90	
One pair shoes (cut with hoe)	6.50	
Two pairs trousers (one torn by rake, one stained kneeling in dirt)	14.80	
Court costs (fight with huckster for tramping down onions)	16.75	
Paid neighbor for three chickens killed	4.50	
Total cost of gardening		$245.87

Returns

(Actual value of products raised.)

Nine radishes (four medium size)	$0.07	
Two pans lettuce (fair but gritty)	.09	
Fifteen string beans (extra good strings)	.05	
Eleven sweet potatoes (two large as thumb)	.14	
Forty-one Irish potatoes (one almost as large as hen egg), at 90 cents peck	.21	
One tomato (hen pecked but almost ripe)	.03	
Eight parts heads of cabbage (eaten by bugs)	.16	
One parsnip (fine for flavoring)	.01	
Twelve onions (two whole bunches, natural aroma)	.10	
Sixteen beets (small but good color)	.18	
Total production of garden		1.04
Balance to be charged to experience		$244.83

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ELECTRICAL CONTRACTORS' ASSOCIATION OF PENNSYLVANIA PLAN EXHIBIT AT COMING CONVENTION

ONE OF the features of the Electrical Contractors' Association of Pennsylvania, to be held at the Hotel Adelphia in Philadelphia, June 19 to 21, will be an exhibition of electrical contracting apparatus, electrical appliances, etc. A number of prominent concerns have contracted for space and the success of the feature is assured.

The exhibit will be held in a large hall in the hotel.

Some of the most prominent men in the electrical industry have accepted invitations to address the convention. Open meetings have been arranged so that guests of the members may attend.

An elaborate entertainment program will be provided for both delegates and guests.

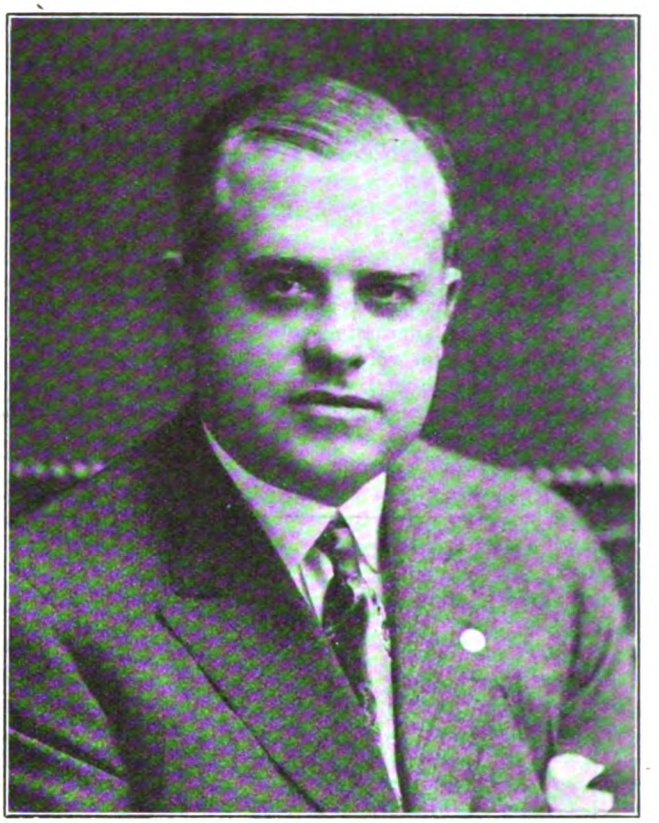
* * * *

MEMBERS AWARDED VULCAN DEGREE

THROUGH an oversight that resulted when assembling names for publication those of C. B. Kennedye, Po. 13814, George W. Pieksen, Po. 12317, and H. E. Spoeneman, Po. 11733, of St. Louis, were omitted from the list of the "One Hundred Point" committeemen who were awarded the degree of Vulcan for the results they obtained in the movement. Although these members were awarded the degree their names were not included among those published. This announcement is to correct the error.

* * * *

A. S. DEVEAU, Po. 453, president of the DeVeau Telephone Manufacturing Company of Brooklyn, has consolidated his firm with that of Stanley & Patterson, whose general offices are at 23 Murray Street, and sales rooms 27 Warren Street, New York City. His affiliation with the newly organized firm is in the capacity of director and secretary. Jovian DeVeau has been identified with the electrical industry for a number of years, having been connected with the Westchester Telephone Company, the Western Electric Company and other concerns. For the past twenty-five years he has been president of the DeVeau Telephone Company. He has been an active worker in Jovian affairs in his city and has also rendered valuable service to a number of other electrical organizations with which he is affiliated.



C. M. CROWFOOT, Po. 1182, Statesman-at-Large, district sales manager of the Cincinnati (Ohio) district for Crouse-Hinds Company, who has recently been transferred to the New York City office of that company. On March 30, Jovian Crowfoot was the guest of honor at a dinner tendered him by F. D. Lawrence, Po. 8907, president of the F. D. Lawrence Electric Company, Cincinnati. Plates were laid for forty guests and the banquet will long be remembered as an exceptionally pleasant affair. Those who attended were: D. M. Crowfoot, Po. 1826; F. D. Lawrence, Po. 1182; W. W. Freeman, Po. 1899V; Warner P. Sayers, Po. 14349; H. Reichman, Jas. A. Muir, J. S. Hill, G. Drach, L. T. Milnor, D. Jones, A. G. Hall, Po. 17700; P. Worth, Po. 4859; W. G. Reuter, F. W. Kleine, Thos. J. Ryan, Po. 6179; Thos. Elliott, Po. 17696; T. J. Creaghead, Po. 3013; E. L. Jones, F. D. VanWinkle, Po. 12965; B. M. Downs, Po. 2508; Chas. S. Nolloth, Geo. C. McKay, Po. 18590; H. J. Hoover, Po. 14334; J. A. Britt, Po. 5904; J. E. Devere, Po. 3325; W. B. Hubbell, Po. 3022; O. B. Marsh, Po. 17718; and Messrs. Yardley, Goldsmith, Pedretti, Hilles, Hones, Detroit and Crouse.

* * * *

JUPITER DOHERTY PRESENTS EDISON WITH ELECTRIC FLAG

THE FOLLOWING extract from the Stimulator aptly describes the presentation by Jupiter Henry L. Doherty, Po. 3208-33, of a beautiful electric flag to Thomas A. Edison, Honorary:

"Two leaders in the electrical world exchanged compliments the other day. When the meeting was over, Thomas A. Edison had an enormous electric flag to mount on one of his buildings at Orange, N. J., and Henry L. Doherty, Jupiter of the Jovians and head of Henry L. Doherty & Company, had an expression of Mr. Edison's gratitude.

"Mr. Edison put the flag on the top of one of his buildings, * * * and in his letter of thanks to Mr. Doherty, he says: 'Old Glory will wave electrically every night until midnight'."

Incidently this brings out the point that the use of electric flags is a splendid means of exhibiting patriotism. Not only do the flags attract attention on account of their beauty, but they can be seen at a great distance at night when the fabric flag is shrouded in darkness.

Electricity has solved the problem of patriotic demonstrations at night and all electrical people should be boosters for the electrification of Old Glory.

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PRACTICAL LESSONS IN ELECTRICITY

LESSON TWENTY-FIVE

ALTERNATING-CURRENT VECTORS AND VECTOR DIAGRAMS

By TERRELL CROFT

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THE WORDS "Lagging" or "Lag" as they are used in alternating-current parlance really refer to time. If an alternating current (or an alternating voltage) "lags" behind another alternating current (or voltage) the current (or voltage) which lags, attains its maximum value in each alternation a certain interval of time later than does the current (or voltage) behind which it lags. Since time may be expressed in electrical degrees it may be stated that a current—or voltage—lags behind another current—or voltage—by a certain number of degrees. With a

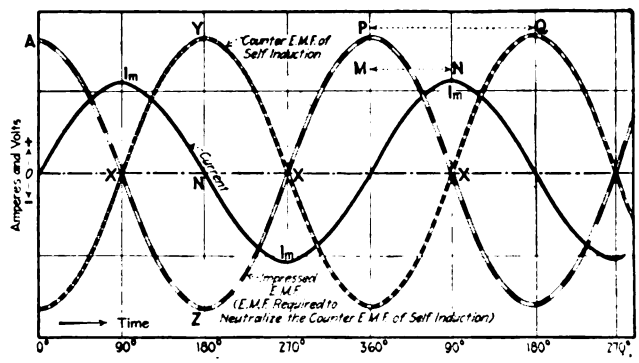

Fig. 1—Graphs of Current and Impressed and Counter e.m.f.s in an Alternating-Current Circuit Containing Inductance Only. (Actually there cannot be a circuit which does not have some resistance.)

frequency of 25 cycles 1 deg. is equivalent to:—1/25 *sec.* ÷ 360 *deg.* = 1/25 × 1/360 = 1/9000 *sec.* With a frequency of 60 cycles 1 deg. is equivalent to:—1/60 *sec.* ÷ 360 *deg.* = 1/60 × 1/360 = 1/21600 *sec.*

EXAMPLE.—In Fig. 1 the current lags behind the impressed e.m.f. by 90 deg. That is, in each alternation, the current attains its maximum value (at *Im*), 90 deg. *later* than the impressed e.m.f. attains its maximum value (at *A*). If the current shown were a 25-cycle current, it would then, with conditions as illustrated, reach, in each alternation, its maximum value:—90 × 1/9000 = 1/100 *sec.* later than the e.m.f. attained its maximum value. With a 60-cycle current and the conditions shown, the current would lag behind the voltage by 90 × 1/21, 600 *sec.* = 1/240 *sec.*

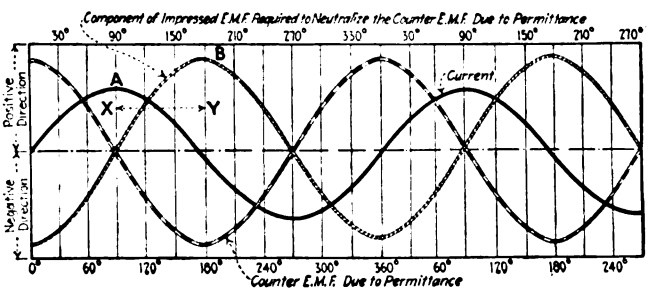
Component of Impressed E.M.F. Required to Neutralize the Counter E.M.F. Due to Permittance
30° 90° 150° 210° 270° 330° 30° 90° 150° 210° 270°
Positive Direction
Negative Direction
A
B
X
Y
Current
0° 60° 120° 180° 240° 300° 360° 60° 120° 180° 240°
Counter E.M.F. Due to Permittance

Fig. 2—Showing How the Counter e.m.f. Due to Permittance Directly Opposes the Impressed e.m.f.

The words "leading" or "lead" as used in reference to alternating-current phenomena also refer to time. When a current (or voltage) "leads" another current (or voltage) it attains its maximum value in each alternation a certain interval of time before the voltage (or current) which it leads attains its maximum value. The amount of lead in any case may be expressed in either degrees or in seconds, as may lag, as described above.

EXAMPLE.—In Fig. 2 the current, *A*, leads the impressed e.m.f. *B*, by 90 deg., as shown, for instance at *XY*. In Fig. 1 the impressed e.m.f. leads the current by 90 deg., as shown for instance at *MN*, and the impressed e.m.f. leads the counter e.m.f. by 180 deg., as shown for instance at *PQ*.

There are two graphic methods of representing alternating e.m.f. or current values—by vectors and by sine curves. That this statement is true might be inferred from preceding statements. Each of the two methods has, as will be demonstrated, its applications. Furthermore, it is sometimes desirable to use the two in conjunction with one another.

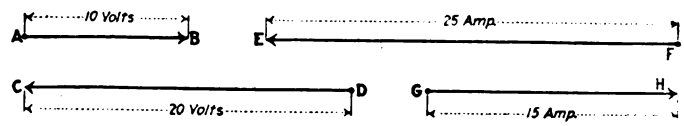

Fig. 3—Vectors Representing Voltages and Currents

A vector is a line representing by its length the intensity of some certain alternating e.m.f. (voltage) or alternating current.

EXAMPLE.—Refer to Fig. 3. The line *AB* represents, to scale, an e.m.f. of 10 volts in one, say the positive, direction. Then *DC* represents, to the same scale, an e.m.f. of 20 volts in the opposite or negative direction. Similarly, *FE* may represent, to scale, a current of 25 amp. in the negative direction while *GH* represents, to the same scale, a current of 15 amp. in the positive direction. Vectors may, obviously, be drawn to any convenient scale. Where two vectors are to be compared, both should be drawn to the same scale.

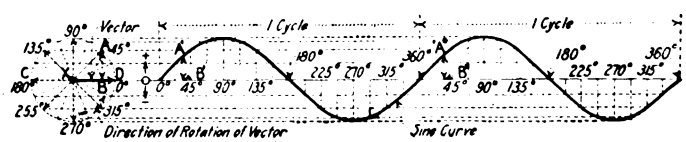

Fig. 4—Showing a Rotating Vector and a Sine Curve "Generated" Thereby

Sometimes vectors are assumed to rotate, as in Figs. 4 and 5. When a vector rotates, the distance, at any given instant, of the end of the vector describing the circle, from the zero (usually taken as the horizontal) axis, is proportional to the instantaneous value of the e.m.f. or current developed at the corresponding instant.

EXAMPLE.—The line *XD* in Fig. 4 is a rotating vector. The length of line *AB* is proportional to the instantaneous e.m.f.

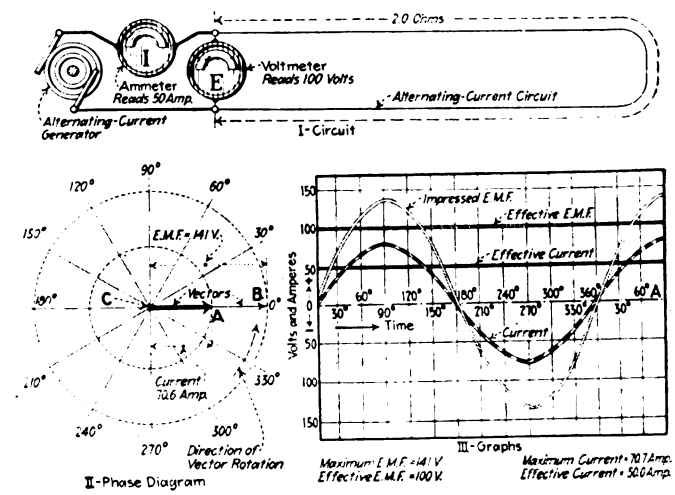

Fig. 5—Example of an Alternating-Current Circuit Containing Resistance (2 Ohms) Only

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induced at the 45-deg. instant. In Fig. 5 (which will be discussed more in detail later), CA is a rotating vector representing in length (to scale) a current (maximum value) of 70.7 amp. and CB is a rotating vector representing in length a maximum e.m.f. of 141 volts.

The distance around the circle of Fig. 5—*II* is measured in degrees and each degree represents a certain interval of time. (The actual length of the time interval in seconds can in any case—where necessary or desirable—be determined by considering the frequency.) Instantaneous values—for example AB—determined as above described may be plotted into a sine curve as shown in Figs. 4 and 5.

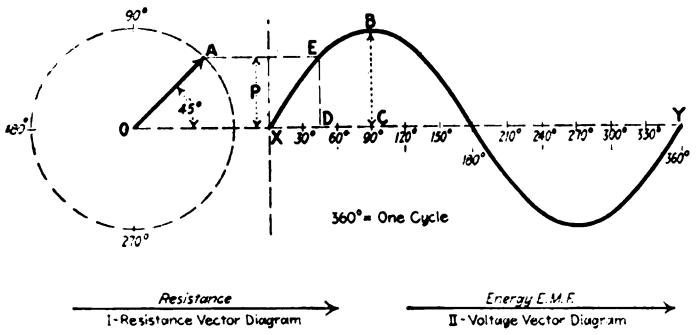

Fig. 6—Explanation of Vector Conventions

EXAMPLE.—In the sine curve of Fig. 4 the distances $A'B'$ and $A''B''$ (each of which is equal in length to AB) are also proportional to the instantaneous e.m.f. at the 45-deg. instant.

NOTE.*—As ordinarily used a vector represents the magnitude of the *maximum* value of the alternating wave current or voltage but it may, if drawn to proper scale, represent the effective value. Fig. 6 shows two methods of representing an alternating wave. The wave may be plotted on a time axis, XY, in which case the amplitude, BC, of the wave is the maximum value, and instantaneous values are ordinates to the curve at the particular instants considered, for example DE, is the instantaneous value at the 30-degree instant.

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Another way of plotting the wave is by a vector, OA, the length of which is proportional to the maximum value of the wave and which is supposed to rotate counter-clockwise at such a constant speed that it makes one complete revolution in the time required for the wave to complete one cycle. The instantaneous values of the wave are always equal to the projection of the vector at the given instant on a vertical line. Thus, it is shown in Fig. 6 that the ordinate ED of the curve at the 45-degree instant is equal, by construction, to the projection P, of the vector OA.

In the wave figure the difference of time phase is represented by the distance on the axis XY between the zero points of the waves. It is evident from the above that a rotating vector

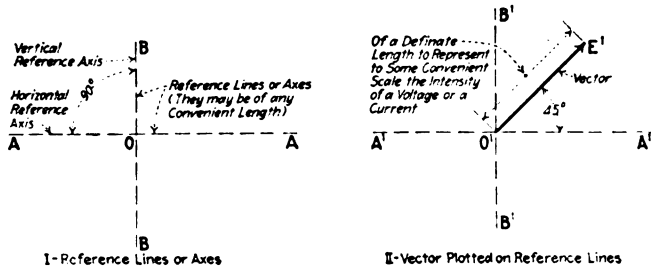

Fig. 6a—Showing Reference Lines or Axes for Vector Diagrams and Their Application

figure always represents *maximum* values. It is possible to represent *effective* values to a different scale by non-rotating vectors because they are equal to maximum values divided by the constant, 1.41. Instantaneous values cannot be shown directly in a vector figure or phase diagram but must be obtained by taking projections.

NOTE.—The lines of different kinds—open, black, dotted, dashed, etc.,—used in Fig. 5 and in a number of the following illustrations, have—in so far as they are different kinds of lines—no special significance. The reason why the different kinds of lines have been used for representing different electrical quantities and values is merely so that the line representing one quantity may be readily distinguished from another line in the same diagram representing a different quantity. Plain black thin lines could have been used for all of the lines in all of the diagrams—but then the diagrams might be much more difficult to follow.

Reference lines in phase or vector diagrams are often drawn before any of the vectors are plotted so that when the vectors are plotted they can be located in some definite position. Thus Fig. 6*a*-*I* shows how such reference lines, AA and BB, are usually drawn at right angles to one another. Obviously, these reference lines may be of an indefinite—any convenient length. At *II* is shown a vector $O'E'$ plotted in the 45-deg.-phase position, assuming counter-clockwise rotation. Usually vectors, in phase diagrams, representing current are plotted along the horizontal axis or reference line as shown in Fig. 6*b*. Also vectors representing the energy e.m.f.—to be discussed later—are usually plotted on the horizontal axis. The vector

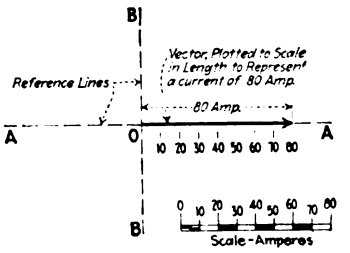

Fig. 6b—A Vector Representing a Current of 80 Amp. Plotted on Reference Lines

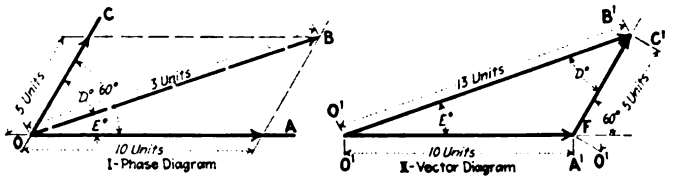

Fig. 7—Phase and Vector Diagrams

OA in Fig. 6*b* represents, to scale, as shown, an alternating current of 80 amp., which may be either maximum or an effective value.

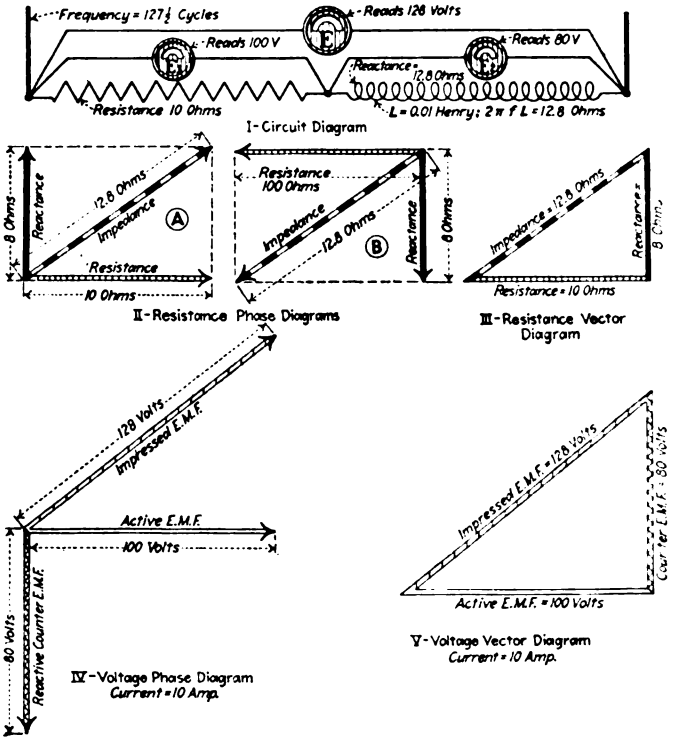

Fig. 8—Examples of Phase and Vector Diagrams

Phase diagrams and vector diagrams are shown in the accompanying illustrations. A phase diagram* represents the magni-

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tude and relative phase positions of electric pressures (e.m.f.s or voltages) or currents. A vector diagram represents the magnitude of the pressures or currents but *may* not represent their phase relations. A vector diagram is always a polygon and is often a triangle. Both phase and vector diagrams are composed of vectors which may (except where the vector is rotating) represent either effective or maximum values. As suggested above, rotating vectors can represent only maximum values. Since an

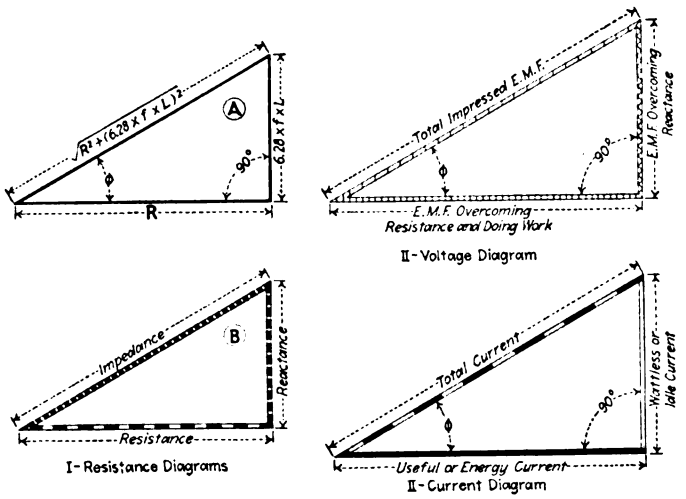

Fig. 9—Typical Vector Diagrams

effective value is always equal to 0.707 times its maximum value the same vector (unless it is a rotating vector) if the proper scale is assumed, may represent either an effective or a maximum value.

EXAMPLES OF PHASE AND VECTOR DIAGRAMS.—First consider the phase diagram of Fig. 7-*I*. If an alternating e.m.f. of 5 volts be represented by *OC*, 5 units long, and another e.m.f. of 10 volts, of the same frequency but which lags 60 deg. behind the first, be represented by *OA*, 60 deg. away from *OC* and 10 units long; then *OB* (which scales 13 units long) will represent their resultant or sum. In other words, the length of the line *OB* to scale is equal to the sum of the e.m.f.s of 5 volts and 10 volts which differ in phase by 60 deg. The line *OB* is obtained by completing a parallelogram, having *OC* and *OA* for two of its sides then the diagonal *OB* is the sum (vector sum) of *OC* and *OA*. The resultant e.m.f., 13 volts, will lag *D* deg. behind *OC* and will lead *OA* by *E* deg.

The vector diagram of Fig. 7-*II*, which is equivalent to the phase diagram of *I*, is obtained by drawing lines equal and parallel to those representing the same values in the phase diagram. Note that in the vector diagram, the phase relations (angles) between *O' B'* and *O' A'* and between *O' B'* and *O' C'* are correct and correspond to those in *I*. But to obtain the true angle (60 deg.) between *O' C'* and *O' A'* the angle *F* (in *II*) must be taken. The lines *OC*, *O' C'*, *OA* and *O' A'* are called *components; OB* and *O' B'* are respectively their *resultants*.

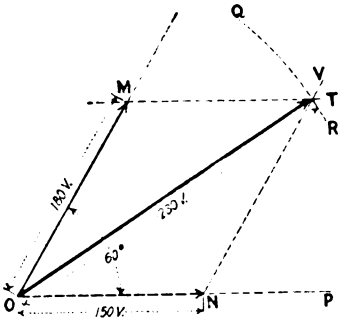

Fig. 10—Illustrating the Resolution of an Alternating e.m.f., *OV*, into Two Components

In Fig. 8 are shown the phase and vector diagrams of the resistance and voltage conditions obtaining in the circuit and with the frequency indicated.* These diagrams and their significance will be further explained in following matter. Some other typical vector diagrams, which will also be further treated subsequently, are shown in Fig. 9. The symbols ∅ is a Greek letter pronounced phi; it is often used as a designation or "shorthand" expression to indicate a lag angle. While the diagrams of Figs. 7 and 8 and 9 show voltage values, similar diagrams may be plotted to represent current values.

The resolution of an alternating e.m.f. into components is a process which is the inverse of combining two alternating e.m.f.s to ascertain their resultant e.m.f. or their sum as just described. Any alternating e.m.f. of a given frequency may be "resolved" into two e.m.f.s of the same frequency which two e.m.f.s will differ in phase from one another by a selected phase angle. That is, the sum of the two e.m.f.s thus obtained will equal the resultant —or their combined—e.m.f. The process involved is similar to that used in mechanics for resolving a force into two components and may be best explained by a specific example:—

EXAMPLE.—Resolve an e.m.f. of 280 volts into two component e.m.f.s which differ in phase by 60 deg. so that one of these component e.m.f.s will be 180 volts. It is understood that the component and resultant e.m.f.s are of the same frequency. SOLUTION.—Draw to scale (Fig. 10) a line, *OM*, 180 units long at an angle of 60 deg. from a base line *OP* of indefinite length. This

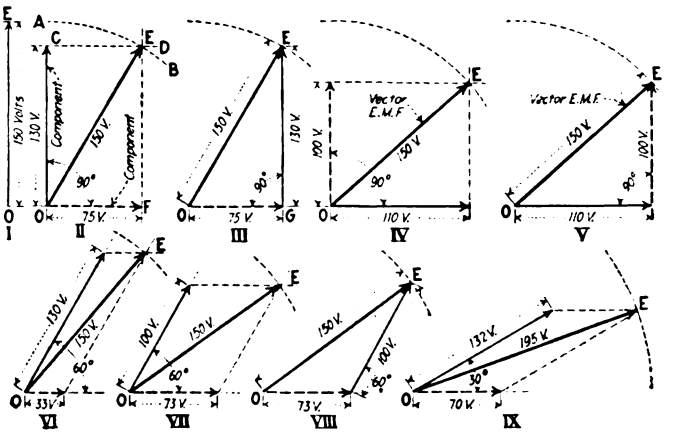

Fig. 11—Examples of the Resolution of an e.m.f., *OE*, into Components

line *OM* represents the component e.m.f. of 180 volts. Draw a line, *MT*, of indefinite length, parallel to *OP*. With a compass, with *O* as a center and a radius 280 units long, strike a part of a circle *QR*. From the point, *V*, where the circle cuts *MT*, drawn *VN* parallel to *MO*. Then, *NO*, which scales about 150 units—or 150 volts long—is the other component. Hence, an e.m.f. of 280 volts may be resolved into two component e.m.f. differing in phase by 60 deg. is 180 volts and 150 volts respectively. That is, the resultant or sum of two e.m.f.s of 180 volts and 150 volts which differ in phase by 60 deg. is 280 volts. While the diagram of Fig. 10 shows voltage values, similar diagrams may be plotted to represent current values.

An alternating e.m.f. may be resolved into an infinite number of pairs of components because it is obvious that for every different value of lag angle between components, the components will be of different values. Furthermore, for every change in value of one of the components there will be a corresponding change in

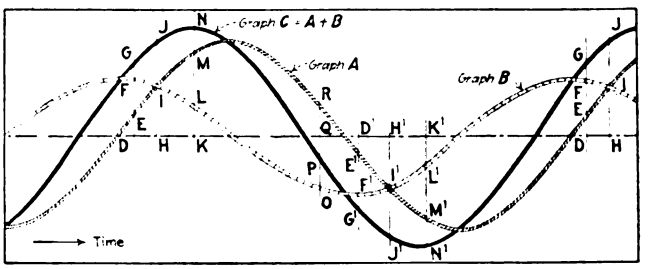

Fig. 12—Illustrating the Addition of Sine Graphs

value of the other component. This situation is illustrated in the following example, wherein e.m.f. values are resolved into components; current values may, by similar methods, be resolved into components.

EXAMPLE.—Consider Fig. 11 wherein the e.m.f., *OE*, of 150 volts, shown at *I*, is resolved into component e.m.f.s differing in phase by different angles. In the phase diagram of *II* the e.m.f. of 150 volts, *OE*, is resolved into two component, differing in phase by 90 deg., of 130 volts and 75 volts respectively; at *III* is shown the corresponding vector diagram. In *IV* the e.m.f. of 150 volts is resolved into two component e.m.f.s of 100 volts and 110 volts which also differ in phase by 90 deg.; the equivalent vector diagram is plotted at *V*.

*Jackson's ALTERNATING CURRENTS.

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In *VI* the 150-volt e.m.f. has been resolved into two components of 130 volts and 33 volts, which differ in phase by 60 deg. And in *VII* the same 150-volt pressure is again resolved into two e.m.f.s differing in phase by 60 deg., but in this example they are 100 volts and 73 volts; the equivalent vector diagram is shown in *VIII*. In *IX* an e.m.f. of 195 volts has been resolved into two components of 132 volts and 70 volts, respectively, which differ in phase by 30 deg.

Sine curves can be added and subtracted. See Fig. 12. If two sine curves (*A* and *B*, Fig. 12) each of the same frequency, but differing in phase are added together, a third sine curve (*C*) of the same frequency can be plotted which will represent their sum.

EXAMPLE.—To obtain curve *C* (Fig. 12) the heights of corresponding points in *A* and in *B* are added. Thus, $DG = DE + DF$, $HJ = HI + HI$, $KN = KL + KM$ and $QP = QO - RQ$.

Similarly, sine curves of the same frequency can be subtracted from one another, by subtracting heights of points in one curve from the corresponding heights in another.

EXAMPLE.—Curve $C = A + B$, $B = C - A$ and $A = C - B$, all from Fig. 12.

Committee of Jovian Goodfellowship

For the Relief of Worthy Jovians in Distress

J. ROBERT CROUSE, Po. 260-8, Chairman
Nela Park, Cleveland
HENRY L. DOHERTY, Po. 3208-32
Care Henry L. Doherty & Co., 60 Wall St., New York City
ELL C. BENNETT, Po. 3932-13V
Syndicate Trust Building, St. Louis

CREATED by the New York Annual Meeting and given power and funds to act for the relief of worthy Jovians in distress. Application for such relief can be made to any member of the committee by any Jovian, either on his own behalf or in the interest of others. Such applications will be considered as confidential and will be handled solely by this committee.

CHARTERED
JOVIAN LEAGUES

Cincinnati	Charter No. 1
Kansas City, Missouri	" No. 2
Pittsburgh	" No. 3
Minneapolis	" No. 4
St. Joseph, Missouri	" No. 5
Louisville, Kentucky,	" No. 6
Stark County Jovian League Comprising the towns of Massillon, Canton and Alliance, Ohio.	" No. 7
Tulsa, Okla.	" No. 8
Eau Claire, Wis.	" No. 9
Harrisburg, Pa.	" No. 10
Wichita, Kan.	" No. 11
Winnipeg, Man.	" No. 12
Bay City, Mich.	" No. 13
Milwaukee, Wis.	" No. 14
Port Arthur, AND Fort William, Ont.	" No. 15
Oklahoma City	" No. 16
Galveston, Texas	" No. 17

More Are Coming!!!

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EMPLOYERS
CAN YOU USE ANY OF THESE MEN?

Do You Need
AN EXECUTIVE, SALESMAN, SUPERINTENDENT, ENGINEER OR OTHER EMPLOYE?

WE PUBLISH below a list of more than 300 applications now on file with our Employment Bureau, giving the number under each classification and a limited statement of the specifications. Among these you will surely find the man to fill the place you have open. Let us know your requirements, and we will take pleasure in putting the applicants in touch with you promptly. Address The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

CLASSIFICATION	No. on File	Age	Qualifications	Experience	Salary Wanted	Location
Advertising Managers	1	25	High School	.....	$125	St. Louis.
Bookkeepers	5	26–31	High School	5–14 yrs.	$65–100	Anywhere.
Central Station Engineers	9	22–46	H. S.-Univ.	6–18 yrs.	$60–150	Anywhere.
Clerical	5	22–40	High School	2–10 yrs.	$65–125	Anywhere.
Commercial Laboratory Workers	2	29–32	Tech. School	11 yrs.	$150	Anywhere.
Construction Engineers	9	21–49	H. S.-Univ.	4–20 yrs.	$50–200	Anywhere.
Consulting Engineers	2	27	Tech. Grad	6 yrs.	.....	Anywhere.
Contracting Engineers	2	25–26	H. S.-Tech.	Practical	$100	Anywhere.
Draftsmen	3	25–31	Tech. School	5–18 yrs.	$80–150	Anywhere.
Electricians	5	20–35	H. S.-Univ.	3–12 yrs.	$60–100	Anywhere.
Electrical Engineers	19	22–45	Practical-Univ.	5–20 yrs.	$65–300	Anywhere.
Engineers	4	23–31	Practical-Univ.	5–12 yrs.	$120–160	Anywhere.
Estimator	1	42	Practical	.....	.....	Anywhere.
Fixture Man	1	28	Practical	10 yrs.	.....	Anywhere.
Foremen	4	27–31	Practical	7–14 yrs.	$125–160	Anywhere.
General Managers	4	30–34	Practical	7–15 yrs.	$250–417	Anywhere.
Illuminating Engineers	2	24–29	Univ	5–7 yrs.	$150	Anywhere.
Linemen	3	24–28	High School	4–9 yrs.	$90	Anywhere.
Maintenance Men	1	26	High School	6 yrs.	.....	Anywhere.
Managers, Commercial Department	1	35	Practical	12 yrs.	$200	Anywhere.
Managers, Contracting	2	26–29	College	5–7 yrs.	$125–166	Anywhere.
Managers, Engineering Department	1	.....	Univ	6 yrs.	.....	Anywhere.
Managers, Jobbing House	1	32	College	13 yrs.	$10,000	Anywhere.
Managers, Office	1	32	High School	10 yrs.	$200	Anywhere.
Managers, Plant	21	25–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere.
Managers, Store	1	29	Univ.	10 yrs.	$125	West.
Managers, Railway	1	39	Practical	4 yrs.	$300	Anywhere.
Managers, Traffic	1	37	Practical	15 yrs.	$250	Anywhere.
Manufacturers Representatives	17	30–46	Practical-Tech.	9–20 yrs.	Com.–$300	Anywhere.
Mechanical Engineers	1	40	Univ.	.....	$200	St. Louis.
Meter Testers	3	25–34	Grade-College	8–16 yrs.	$100	Anywhere.
New Business Managers	6	29–34	H. S.-Univ.	9–15 yrs.	$100–200	Anywhere.
Office Executives	14	25–47	Grade-Univ.	4–18 yrs.	$80–200	Anywhere.
Purchasing Agent	13	24–41	Grade-Tech.	4–21 yrs.	$80–200	Anywhere.
Sales Engineers	7	24–31	College-Univ.	4–11 yrs.	$100–200	Anywhere.
Sales Managers	15	28–45	H. S.-Univ.	4–17 yrs.	$150–417	Anywhere.
Salesmen	103	22–55	H. S.-Univ.	2–25 yrs.	$75–200	Anywhere.
Store Keepers	2	24–33	Practical	3–5 yrs.	$75–150	Anywhere.
Superintendents	41	26–46	H. S.-Univ.	3–15 yrs.	$100–500	Anywhere.
Supervisors Lighting	1	25	Technical	7 yrs.	$100	East.
Telephone Engineers	2	24–28	H. S.-Tech.	5–7 yrs.	.....	Anywhere.
Testing Engineers	1	24	Technical	2 yrs.	$100	Anywhere.
Wiremen	2	25–30	High School	9–17 yrs.	$100–125	Anywhere.

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JOVIANS!
Can You Use Any of These Jobs?

Here is a possible opportunity for the member who wishes to better himself or is in need of employment.

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, are seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau. A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of any of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

1. **Advertising Man.** Eastern manufacturer needs young advertising man who can also write up bulletins, prepare price lists, etc.
2. **Billing and Entry Clerk.** Large Boston manufacturer wants man with experience in electrical supply business.
3. **Bookkeeper.** Position open for man acquainted with electric line, in Michigan retail house.
4. **Central Station Engineers.** An opening with large city public service concern, for several engineers; $80.00 to $95.00 a month to start.
5. **Central Station Engineers.** Summer resort has temporary employment for one or two plant engineers; salary $110.00 per month.
6. **Chemist.** A Chicago lighting supplies factory has an attractive opening for a chemist familiar with the manufacture of flashlight batteries.
7. **Draftsmen.** Positions paying $80.00 to $100.00 per month open with large central station company.
8. **Electrical Contractor.** New England manufacturing concern is looking for a man who has had practical experience in and made a paying success of an electrical contracting business.
9. **Electrical Engineers.** Manufacturing concern wants men acquainted with motor, fan and blower design, who wish to work up as the business grows.
10. **Electrical Engineers.** A large, metropolitan central station company wants to get in touch with a number of these; salary $65.00 to $90.00 per month.
11. **Electrical Supply Salesman.** Old, established house in New Orleans wants active young man to cover southern territory.
12. **Electrical Supply Salesmen.** One of the largest houses in the country wants a number of men on the road.
13. **Electricians.** A number of men wanted by eastern manufacturer of recording instruments.
14. **Electricians and Wiremen.** Thirty to fifty cents an hour offered by auto repair department of Michigan electric garage.
15. **Estimator.** Eastern manufacturer has opening for man acquainted with the electrical end of the business.
16. **Foreman.** Michigan electric house wants man to handle the practical end of its contracting department.
17. **Ledger Clerks.** An Illinois public service company can use several men in this capacity.
18. **Office Executive.** Attractive opening for the right man with large Michigan electric house.
19. **Office Executive.** A mid-west electric supply house will pay $125.00 per month for a satisfactory man, with real ability to make good.
20. **Sales Engineer.** An opening, for the right man, with a manufacturer of an electric time recorder.
21. **Salesmen.** New York maker of electric signs wants able salesman to push his goods.
22. **Salesmen, Commission.** Good opening, in live Michigan city, to sell electric appliances.
23. **Storekeeper.** Practical man, with experience in retail electric supply house, needed by a Michigan correspondent.
24. **Store Salesman.** Electric supply house in Michigan has opening for man in retail department.
25. **Superintendent.** An ambitious man, with practical experience, will have consideration by a Michigan electrical contractor.
26. **Testing Engineers.** Electrical instrument manufacturer wants to get in touch with several men.
27. **Traveling Salesmen.** Electrical supply house, located in Montana, wants one city salesman and two to cover the state.
28. **Traveling Salesman.** Ohio manufacturing concern wants a man to cover Ohio, Indiana and Eastern Michigan—one who can eventually become office manager; salary $1200.00 to $1500.00 a year.
29. **Traveling Salesmen.** Chicago electrical manufacturing concern is in need of one or two men on the road.
30. **Salesmen.** Graduate Electrical, who speak spanish, splendid opening with large manufacturing concern over seas territory.

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STATESMEN-AT-LARGE

ALEXANDER, H. W., Po. 17191, 29 West 39th St.....New York, N. Y.
BINFORD, JULIAN, Po. 1174V, care Westinghouse Lamp Co.....Atlanta, Ga.
BISCHOFF, W. E., Po. 3190, care W. N. Matthews & Bro.....Chicago, Ill.
CHASE, SAMUEL A. Po. 4424, care Westinghouse Elec. & Mfg. Co...E. Pittsburgh, Pa.
COLKITT, J. N., Po. 2627, care John A. Roeblings Sons Co.....Los Angeles, Cal.
CROWFOOT, C. M., Po. 1182, care Crouse-Hinds Co.....Cincinnati, Ohio
CROW, GALEN, Po. 925V, care Public Service Co. of Oklahoma.....Guthrie, Okla.
DOWNS, B. M., Po. 2508, care Hemingray Glass Co.....Covington, Ky.
DUNHAM, A. W., Po. 7352, care Sun Ray Manufacturing Co.....Oshkosh, Wis.
FOSTER, F. C., Po. 3398, 823 Illuminating Building.....Cleveland, Ohio
GUARDIA, A. A., Po. 2657, 4447 Magnolia Ave.....Chicago, Ill.
HERSTEIN, W. R., Po. 765V, care Electric Supply Co.....Memphis, Tenn.
HILL, G. W., Po. 1271, 29 West 39th St.....New York, N. Y.
HICKOX, NORMAN B., Po. 7881, care National X-Ray Reflector Co., 235 West Jackson Blvd.....Chicago, Ill
JOHNSON, FRED, Po. 177V, 1110 Federal Reserve Bldg.....St. Louis, Mo
LAUDERBACH, F. E., Po 11655, 917 Pine St.....St. Louis, Mo
MONTGOMERY, R., Po. 6147, care Louisville Gas & Electric Co.....Louisville, Ky.
RAMIER, J. F., Po. 10604, care Memphis Cons. Gas & Electric Co..Memphis, Tenn
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville, Ky.
RIPLEY, L. O., Po. 7042V, care Kansas Gas & Electric Co.....Wichita, Kan
SERVA, A. A., Po. 425, 2420 Hoagland Ave.....Ft. Wayne, Ind.
VIOT, H. F., Po. 2156, 1810 Farnam St.....Omaha, Neb.
VOGAN, W. G., Po. 15974, care Northern Electric Co.....Winnipeg, Man.
VOGEL, J. C., Po. 2254-32V, 59th and Woodland Ave.....Philadelphia, Pa.
WADDINGTON, E. H., Po. 5176, care Western Electric Co.....St. Louis, Mo
WAKEMAN, J. M., Po. 524, 29W 39th St.....New York, N. Y

JOVIAN STATESMEN

ALABAMA
MATTHEWS, H. W., Po. 4476, care Burgoon-Matthews Electric Co.....Birmingham

ARKANSAS
COUCH, H. C., Po. 13893, care Arkansas Power Co.....Arkadelphia

CALIFORNIA
ORRICK, MURRAY S., Po. 5886, care Western Electric Co.....San Francisco

COLORADO
TRAVER, A. F., Po. 2354, care Denver Gas & Electric Co.....Denver

CONNECTICUT
HOLMES, T. L., Po. 3046, care Western Electric Co.....West Haven

GEORGIA
COLLIER, RAWSON, Po. 4458, care Georgia Railway & Power Co.....Atlanta

IDAHO
KIERSTED, EARNEST C., Po. 10258, care Idaho Power Co.....Twin Falls

ILLINOIS
CORBY, J. S., Po. 755V, care Bryan-Marsh Electric Works, General Electric Co.....Chicago

INDIANA
OBLINGER, R. P., Po. 4851, care Indianapolis Electric Supply Co.....Indianapolis

IOWA
DURBIN, B. H., Po. 10301, care Bryan-Marsh Works, General Electric Co.....Kansas City, Mo.

KENTUCKY
TAFEL, PAUL, Po. 13337, care H. C. Tafel Electric Co.....Louisville

LOUISIANA
CLEMENT, W. E., Po. 2557, care New Orleans Railway & Light Co.....New Orleans

MASSACHUSETTS
TROY, M. O., Po. 3271-37, care General Electric Co.....Schenectady, N. Y.

MICHIGAN
CAVANAUGH, J. A., Po. 11199, care Benton Harbor & St. Joe Ry. Co...Benton Harbor

MINNESOTA
NORTH AND SOUTH DAKOTA
ROFELTY, O. A., Po. 7839V, care General Electric Co.....Minneapolis

MISSISSIPPI
GORENFLO, W. F., Po. 3342, P. O. Box 28.....Gulfport

MISSOURI
DENTON, A. P., Po. 1415V, care Denton Engineering & Construction Co.....Kansas City

NEBRASKA
ZIMMAN, I. B., Po. 1411, care Omaha Electric Light & Power Co.....Omaha

NEW HAMPSHIRE
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston, Mass.

NEW JERSEY
HEIDRICH, HERMAN C., Po. 14439, care Electric Repair & Motor Co.....Newark

NEW YORK
CLELAND, H. E., Po. 18656, care Electrical World.....New York City

OHIO
WILSON, A. M., Po. 14357V, care University of Cincinnati.....Cincinnati

OKLAHOMA
MUSSON, H. E., Po. 7899V, care Smith & Swan, 617 West Main St .....Henriette

OREGON
MOODY, A. S., Po. 4576, care Pacific States Electric Co.....Portland

PENNSYLVANIA
PEIRCE, C. L., Po. 3252, care Hubbard & Co.....Pittsburgh

RHODE ISLAND
DAVENPORT, E. R., Po. 8019, care Narragansett Electric Light Co....Providence

SOUTH CAROLINA
FULLER, W. W. Po. 16462, care Isle of Palms Traction Co.....Charleston

TENNESSEE
FLOURNOY, FRANK, Po. 14793, care Cumberland Telegraph & Telephone Co.....Memphis

TEXAS
PHIPPS, W. R., Po. 10676, care Brush Electric Light Co.....Galveston

UTAH
BRANDENBURGER, LEO, Po. 4755, care O. H. Davidson Equipment Co.....Salt Lake City

VERMONT
LARABEE, E. E. Po. 1145, care Twin States Gas & Electric Co.....Bennington

VIRGINIA
SEILER, GUY E., Po. 7479, care Virginia Railway & Power Co.....Richmond

WEST VIRGINIA
POWERS, W. R., Po. 2784, care Consolidated Heat, Light & Power Co..Huntington

WISCONSIN
CRABTREE, WALTER B., Po. 6155, care Globe Electric Co.....Milwaukee

PROVINCE OF ALBERTA
RICHARDS, NORMAN S., Po. 8985, care Northern Electric Co.....Calgary

PROVINCE OF MANITOBA
SCHUMACHER, J. H., Po. 4742, Schumacher-Gray Co., Ltd.....Winnipeg

PROVINCE OF QUEBEC
HYDE, E. N., Po. 1614, care Northern Electric & Manufacturing Co., Ltd..Montreal

FIRST AND SECOND TRIBUNES

ALABAMA
MATTHEWS, H. W., Po. 4476, First Tribune, care Burgoon-Matthews Electric Co.....Birmingham
REYNOLDS, H. C., Po. 2072, First Tribune, care Southeastern Underwriters' Association.....Mobile

ARKANSAS
DREES, C. J., Po. 1572, First Tribune, care Arkansas Electric Co.....Little Rock
RUSH, J. C., Po. 1556V, First Tribune, care Rush Bros.....Hot Springs

CALIFORNIA
*BROCKWAY, A. E., Po. 6039, First Tribune, care Latourrette Fiscal Co., 3431 Sacramento Ave.....Sacramento
(*J. O. Tobey, Po. 12226, Second Tribune)
*FISHER, R. E., Po. 7389, First Tribune, care Pacific Gas & Electric Co.San Francisco
(*W. L. Neelands, Po. 9395, Second Tribune)
*GOULD, T. A., Po. 18057, First Tribune, care Redondo Home Telephone Co.....Redondo Beach
KLAUBER, L. M., Po. 14635, First Tribune, care San Diego Consolidated Gas & Electric Co.....San Diego
(R. C. Cavell, Po. 14627, Second Tribune)
*MURPHY, W. A., Po. 12220, First Tribune, Stockton Hotel Annex.....Stockton
(*L. F. Goudall, Po. 12216, Second Tribune)
*SESSIONS, H. N., Po. 14256, First Tribune, care Southern California Edison Co., 120 East Fourth St.....Los Angeles
(*K. E. Van Kuran, Po. 7062, Second Tribune)
(*Henry Mellman, Po. 9392, Second Tribune).....Oakland

COLORADO
*PAUL, CLARENCE M., Po. 4942, First Tribune, care Trinidad Gas & Electric Supply Co.....Trinidad
*TRAVER, ALVA F., Po. 2354, First Tribune, Denver Gas & Electric Co....Denver
(*Harry L. Woolfenden, Po. 1062V, Second Tribune)

DISTRICT OF COLUMBIA
CARROLL, HARRY R., Po. 1734, First Tribune, 514 Twelfth St., N. W..Washington

GEORGIA
*BYCK, SYLVAN M., Po. 7437, First Tribune, care Byck Electric Supply Co.Waycross
(Geo. E. Watts, Po. 12482, Second Tribune).....Atlanta
*FLANIGAN, C. D., Po. 4708, First Tribune, care Athens Railway & Electric Co.....Athens

IDAHO
MCKELVEY, G. E., Po. 9704, First Tribune, care Electric Investment Co....Boise
*DOVERY, C. G., Po. 10241, First Tribune, Idaho Power Co.....Twin Falls
(*J. O. Blackstone, Po. 15318, Second Tribune)

ILLINOIS
*BAUM, B. E., Po. 19260, First Tribune, care Vermillion County Telephone Co.....Danville
*BROWN, EDWIN C., Po. 5278, First Tribune, care Galva Electric Light Co..Galva

ILLINOIS—Continued
*GREEN WM. A., Po. 13279, care Green Electric Co., 315 South Jefferson St...Peoria
(*Jas. R. Downs, Po. 13277, Second Tribune)
*KETTRON, C. W., Po. 16416, First Tribune, President, Illinois Elect. Porc. Co.....Macomb
LANPHIER, R. C., Po. 3236, care Sangamo Electric Co.....Springfield
(James R. Massey, Po. 8930, Second Tribune)
MORSE, CHESTER A., Po. 14611, First Tribune, care Central Public Illinois Service Co.....Mattoon
(Donald R. Truax, Po. 14617, Second Tribune)
*MOTT, H. A., Po. 17507, First Tribune, care Chicago Telephone Co., 212 W. Washington St.....Chicago
(*A. L. Nelson, Po. 15384, Second Tribune)
WESSEL, O. E., Po. 9814, First Tribune, care East St. Louis Light & Power Co.....East St. Louis
(Chas. E. Broderick, Po. 1154, Second Tribune)
YONTS, CHAS. B., Po. 11040, First Tribune, care Northern Illinois Utilities Co.....Dixon

INDIANA
*BOOHER, O. M., Po. 12493, First Tribune, Manager, Commercial Department, Indiana Railways & Light Co.....Kokomo
HARRIS, A. B., Po. 14154, First Tribune, 570 Washington St.....Gary
*LEE, WALLACE O., Po. 11440, First Tribune, Indianapolis Light, Heat & Power Co.....Indianapolis
*KLINE, J. J. Po. 6165, First Tribune, care Fort Wayne Works, General Electric Co.....Fort Wayne
(*Jas. I. Toy, Po. 14768, Second Tribune)
NIGHT, CHAS. H., Po. 4828, First Tribune, care Indiana & Michigan Electric Co.....South Bend

IOWA
*FLACK, FRANK W., Po. 13979, First Tribune, care Iowa Ry. & Light Co..Coon Rapids
KING, R. H., Po. 3984, First Tribune, care King Plumbing Co.....Keokuk
*LOVEGROVE, N. W., Po. 5638, First Tribune, care Herring Motor Co. Des Moines
MCINNERNEY, B., Po. 1400, First Tribune, care Kimball Bros. & Co..Council Bluffs
(E. S. Damon, Po. 1398, Second Tribune)
MURPHY, J. E., Po. 15800, First Tribune, care Murphy-Dunham Co..Sioux City

KANSAS
*CAMP, ROBERT N., Po. 16505, First Tribune, 108½ East Ash St.....Salina
(J. E. French, Po. 15811 Second Tribune)
CATES, WILLIAM C., Po. 17862, First Tribune, care Cates Electric Co...Hutchinson
*HARVEY, J. L., Po. 6546, First Tribune, care General Electric Co., 945 Emporia St.....Wichita
(*Charles A. Stanley, Po. 9690, Second Tribune)
(J. E. French, Po. 15811, Second Tribune)
*HUBBARD, HARVEY B., Po. 17623, First Tribune, care Hubbard Electric Co.Beloit
*MAGRUDER, H. W., Po. 15816, First Tribune, care Liberal Light, Ice & Power Co.....Liberal
*MURPHY, JAS. R., Po. 15817, First Tribune, care Great Bend Water & Electric Light Co.....Great Bend

(*These First and Second Tribunes appointed by Reigning Jupiter. All Statesmen-at-Large and Statesmen in this list were appointed or elected to serve during this administration.)

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KENTUCKY

*ADAMS, F. C., Po. 18315, First Tribune, proprietor, Adams Electric Co...Sulphur
HANNAH, W. M., JR., Po. 13652, First Tribune, care General Electric Co..Lexington
MONTGOMERY, ROBERT, Po. 6147, First Tribune, care Louisville Gas & Electric Co.....Louisville
C. C. Childers, Po. 15494, Second Tribune)

LOUISIANA

*AICKLEN, WM. J., JR., Po. 5666, First Tribune, care Consumers Electric Light & Power Co.....New Orleans
(*W. A. Porteous, Po. 9226, Second Tribune)
*CAMERON, HENRY F., Po. 2556, First Tribune, care Lake Charles Railway, Light & Waterworks Co.....Lake Charles
JOUBERT, W. C., Po. 16467, First Tribune, 409 Man St.....Baton Rouge
*MCCONNELL, JOHN J., Po. 17031, First Tribune, care Rayville Light Plant.Rayville
WILLIAMS, J. A., Po. 5053, First Tribune, care Southwest Gas & Electric Co.....Shreveport
(H. E. Cahn, Po. 13025, Second Tribune)

MARYLAND

(Stanley B. Prather, Po. 1650, Second Tribune).....Baltimore

MASSACHUSETTS

*DERRY, H. W., Po. 8022, First Tribune, care Pittsfield Electric Co.....Pittsfield
(*T. G. Crawford, Po. 7930, Second Tribune)
LAVIN, LEO J., Po. 15143, First Tribune, 95 Pleasant St.....Worcester

MICHIGAN

*AVIS, CLYDE J., Po. 10086, First Tribune, Treasurer, Southern Michigan Light & Power Co.....Morenci
*BRUSH, NORMAN O., Po. 11198, First Tribune, care Capital Electric Co...Lansing
(*Guy G. Crane, Po. 13059, Second Tribune)
CAVANAUGH, J. A., Po. 11199, First Tribune, care Benton Harbor & St. Joe Railway & Light Co.....Benton Harbor
(John Erickson, Po. 16515, Second Tribune)
COTTON, GEORGE, Po. 10089, First Tribune, 821 Lyon St.....Grand Rapids
(Carl Johnston, Po. 12841, Second Tribune)
*COURVILLE, H. W., Po. 13054, First Tribune, care Commonwealth Power Co.Jackson
(*L. C. Tefft, Po. 14209, Second Tribune)
KLOSE, LEROY, Po. 13959, First Tribune, care L. R. Klose Electric Co..Kalamazoo
(Harry D. Georgia, Po. 16324, Second Tribune)
DUQUETTE, EDWARD, Po. 14965, First Tribune, 69 Mason Ave.....Muskegon
HOLLAND, RAY K., Po. 11476, First Tribune, care Gardner & Williams, Cornwall Building.....Ann Arbor
(Geo. E. Lewis, Po. 11481, Second Tribune)
KIMBLE, RICHARD L., Po. 283, First Tribune, care Electric Supply Co...Saginaw
(Geo. A. Trombley, Po. 14750, Second Tribune)
KLING, ALPHA H., Po. 286, First Tribune, 746 Penobscot Building.....Detroit
(T. E. Lowe, Po. 11027, Second Tribune)
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St.....Traverse City
*MCCLOY, A. S., Po. 11051, First Tribune, care Stevenson Hotel.....Detroit
(*J. T. Pearson, Po. 11210, Second Tribune)
*RAYNES, J. FRANK, Po. 13965, First Tribune, care Michigan Carton Co., 61 West St.....Battle Creek
(*Edw. G. Austin, Po. 15151, Second Tribune)
SCHAGANE, P. F., Po. 13871, First Tribune, 617 So. Saginaw St.....Flint
*WATSON, GEO. H., Po. 12548, First Tribune, care Consumers Power Co., 124 Monroe St.....Grand Rapids
*R. H. Vandermass, Po. 16484, Second Tribune)

MINNESOTA

*CURTIS, O., Po. 11830, First Tribune, care Tri-State Tel. & Tel. Co., 301 South Seventh St.....Minneapolis
(*Emil Anderson, Po. 7805, Second Tribune)
FULLER, FLOID M., Po. 8189, First Tribune, 813 Torrey Building.....Duluth

MISSISSIPPI

CHAPPELL, JOHN O., Po. 14040, First Tribune, care Meridian Light & Railway Co.....Meridian
GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co.....Gulfport
*MCANGE, W. N., Po. 16854, First Tribune, care Southern Telephone & Telegraph Co., Telephone Building.....Corinth
*NEWBILL, HOMER J., Po. 16855, First Tribune, Box 413.....Tupelo

MISSOURI

ANDERSON, GEORGE E., Po. 2132, First Tribune, 117 South William St....Moberly
(Nelson Roth, Po. 1427, Second Tribune)
BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co.....Marshall
*BRATNEY, JOHN F., Po. 17779, care Missouri & Kansas Telephone Co..Kansas City
*(F. L. Funsten, Po. 3043, Second Tribune)
(H. T. Ford, Po. 17761, Second Tribune).....Springfield
*CORNELL, A. C., Po. 5756, First Tribune, care Western Electric Co., 814 Spruce St.....St. Louis
(*C. E. Michel, Po. 9061, Second Tribune)
*FOX, CHAS. D., Po. 18163V, First Tribune, care City Light Plant.....St. Joseph
(*S. W. Beale, Po. 6840, Second Tribune)
HENDERSON, C. C., Po. 6249, First Tribune, P. O. Box 302.....Joplin
(A. M. Grall, Po. 4112, Second Tribune)
*MURPHY, L. R., Po. 18185, First Tribune.....Hamilton
*NIENHAUS, J. V., Po. 19219, First Tribune, care Perry County Public Utilities Co.....Perryville

NEBRASKA

BURLEY, W. B., Po. 10291, First Tribune, 318½ West Koenig St.....Grand Island
(J. D. Whitmore, Po. 1409, Second Tribune)

NEVADA

*PETERSON, JOHN R., Po. 5888, First Tribune, P. O. Box 388.....Sparks

NEW JERSEY

ALEXANDER, JOHN P., Po. 11892, First Tribune, Broad St. Bank Bldg....Trenton
COLLISON, GEORGE L., Po. 17040, First Tribune (for Passaic County), 188 Ellison St.....Paterson
CHAVENS, GEO. W., Po. 14435, First Tribune (for Garwood, Cranford and Westfield), 205 Harrison St.....Westfield
*COX, W. A., Po. 18960, First Tribune, care Public Service Electric Co....Newark
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*FEY, W. E., Po. 10120, First Tribune, care Diehl Manufacturing Co..Elizabeth
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*SHEPARD, JAS. A., Po. 16106, First Tribune, care Deming Ice Electric Co...Deming
*SMITH, JAMES R., Po. 16107, First Tribune, care Raton Electric Light & Power Co.....Raton
*SOUTHARD, W. P., Po. 16108, First Tribune, care Albuquerque Gas, Electric Light & Power Co.....Albuquerque

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*BURNS, JOHN H., Po. 870, First Tribune, care McCarthy Bros. & Ford, 41 Eagle St.....Buffalo
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*EICHHORN, HARRY E., Po. 7099, First Tribune, care Municipal Electric Plant.....Columbus
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*HANSEN, MARVIN W., Po. 6121, First Tribune, 34-36 Eleventh St.....Toledo
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*LOEWE, P. M., Po. 3942, First Tribune, care Oberlin Gas & Electric Co...Oberlin
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*PARKER, HERBERT L., Po. 905, First Tribune, care Conneaut Metal Works Co.....Conneaut
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*SALBER, W. E., Po. 14397, First Tribune, 408 Spicer St.....Akron
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(*These First and Second Tribunes appointed by Reigning Jupiter. All Statesmen-at-Large and Statesmen in this list were appointed or elected to serve during this administration.)

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Coming Rejuvenations

May 4—Tupelo, Miss. First Tribune, H. J. Newbill, Po. 16855, care Slantonville Telephone Company, Tupelo, Miss.

May 7—Kansas City, Mo. First Tribune, J. F. Brantney, Po. 17779, care Missouri & Kansas Telephone Company, Gates Building, Kansas City, Mo.

May 8—Muskogee, Okla. First Tribune, L. A. White, Po. 14275, care Muskogee Gas & Electric Company, Muskogee, Okla.

May 15—Lima, Ohio. First Tribune, V. H. Effinger, Po. 15900, care V. H. Effinger Electric Company, 704 South Main Street, Lima, Ohio.

June 15—Los Angeles, Cal. First Tribune, H. N. Sessions, Po. 14256, care Southern California Edison Company, 120 East Fourth Street, Los Angeles, Cal.

THE R. & M. BREEZE

THE JOVIAN takes pleasure in acknowledging receipt of a copy of The R. & M. Breeze, which made its debut April 14, as the semi-monthly organ of the Robbins & Myers Company of Springfield, Ohio. It is a neat, well-arranged magazine of eight pages, 9 x 12 inches in size.

Ralph C. Busbey, formerly of Chicago, an experienced newspaper and publication man, is editor.

The magazine is to be free to the employes of the company. Its announced policy is to be the spokesman of the company's employes, to whom it looks for news.

The editors of The JOVIAN extend congratulations and their best wishes for its success.

* * * *

JOVIAN HOTELS

HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their **current membership cards** at the time of settlement. **Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage.** Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

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Spilled Milk

GAZE here upon this space and having gazed
Let reason speak and you will be amazed
To hear that now, perhaps this very day,
A multitude will see this same display
And read these lines we dedicate to you,
Yet not a one will know you read them too.

Sad, is it not that while these thousands read,
Not one of all the multitude will heed
The fact that you have splendid goods to sell,
Because there is no word about them here to tell.
And while they wonder why we chose to fill
This space with verse—you keep them still.

The milk that's spill'd can not be gathered up,
And none would want of it to take a sup,
But curb their thirst and seek new founts that flow
To fill the cup again—this much we know,
That time gone by will ne'er return again,
But such mistakes as teach were not in vain.

Remember this that this same page will hold
A chance for you next month (if still unsold).
And though you let it slip this time, don't fail
To act at once, for promptness must prevail.
So take advantage of your last mistake
And tell the trade the kind of goods you make.

* * * *

SAN ANGELO COMPANY EXTENDS LINE INTO RURAL DISTRICTS

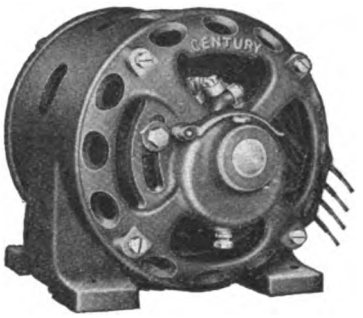
THE SAN ANGELO Water, Light & Power Company, San Angelo, Texas, has just completed and placed in operation over sixty miles of transmission line, from San Angelo to Withers, Texas, and are now supplying energy to the entire district between those two points. The towns in the territory covered are: Harriett, Miles, Rowena, Ballinger and Winters. An important feature that is being developed by the company is that of supplying power for the purpose of ginning cotton. Between 600 and 700 horse power in motors has already been contracted for that purpose. R. J. Irvine, Po. 6251, First Tribune, is vice-president and general manager of the company. The extension has been made under his personal supervision.

APPEARANCE—
—what you see from the outside

Century

Repulsion Start-Induction

Single Phase Motors



Illustrating a ½ h. p. Motor

are constructed for service under severe conditions—not as ornaments. However, the accurate and careful construction following well considered designs, results in a neat symetrical motor, pleasing in appearance even with the stock finishes usually applied to machinery.

1/10 to 40 H. P.—25 to 140 Cycles

Century Electric Company
19th, Pine to Olive Streets
St. Louis, Mo., U. S. A.
217

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Frederick H. Gurtler
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The B. H. Stief Jewelry Co.

offers a handsome piece of Jewelry for the best Jovian Song, to be selected by

JAS. A. CAYCE, Po. 2416, and
ELL C. BENNETT, Po. 3932-13V, Mercury

All Jovians are eligible to participate in the contest. Submit your songs, either with or without music to

JOVIAN ORDER
1415 Syndicate Trust Building
ST. LOUIS, MO.

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YOUR ELECTRICAL APPARATUS has a fixed valuation but unless it is properly protected and grounded against storms that valuation will decrease.

YOUR PROFITS accrue from gross earnings, minus operating and maintenance expenses. If you are continually making repairs as a result of lightning and inefficient grounds, your dividends will develop into maintenance expenses.

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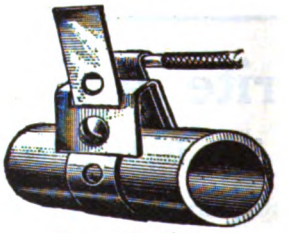

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FAIRMOUNT ELECTRICAL SPECIALTIES

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THE JOVIAN

Volume Eleven JUNE, 1917 Number Seven

A NEW AND NEEDED BENEFIT FOR JOVIANS

YOU CAN DEPOSIT IT IN YOUR BANK—THE PROFIT ON YOUR JOVIAN DUES

THE QUESTION: "What do I get for my dues?" asked by members of every association, fraternal and commercial organization that ever operated upon dues, has been as frequently propounded by Jovians as by any other class. It has, naturally. been repeated oftener and with greater emphasis since last October, when Jovian dues were increased from two to four dollars.

It has been a difficult query to answer to the satisfaction of every Jovian, and that fact has been given due weight by those in charge of Jovian affairs.

There has always been plenty of justification for the payment of Jovian dues, for those who have dipped deeply into the Order's constructive influence upon the electrical industry, or, for those who have taken an active part in the work of the Order. Unfortunately, however, not every one can, or will, allow their minds to travel far enough with the general good Jovianism is doing to see that eventually—although perhaps indirectly—their full share of benefit returns to them. Many others are too occupied (or sincerely believe they are) with business, other organizations and personal affairs to push themselves forward in the Order.

The crying need has been for a tangible, direct-from-the-Order-to-the-member, easily understood benefit that would at least match the amount of money that the individual each year invested in Jovianism.

The common understanding of the word "tangible" comes fairly close to being "dollars and cents." Whether or not that view is correct is beside the question. If a money return is the only benefit that will satisfy a majority of the members of an organization, then it is wisest and best for that organization to either find a method of supplying such a return, or go out of existence. It is too slow, expensive, nerve-racking and ineffective a process to attempt by printers' ink (upon which the Order must largely rely) to change the view-point of some thousands of men who are sure their own idea is right.

All of this has been very well understood by Jovian administrations for many years, resulting in a constant search for some Jovian perquisite to fill the need.

The "Hotel Discount Plan" serves as the answer for a number of members who travel extensively and are keen enough to take advantage of it.

The "Goodfellowship Fund" satisfies those who are its direct beneficiaries and those who are given a close-to-hand example of its usefulness.

The "Employment Bureau" (the scope and effectiveness of which is daily increasing) is actually a very tangible return, but, it is not expressed in figures representing money and, therefore, is not given the credit it deserves.

The many other advantages in Jovian affiliation require vision, knowledge of the needs of our industry, keen insight into what the Order is accomplishing, and the faculty of recognizing as helpful, elements not wrapped in dollar notes of our Uncle Samuel.

So it is that, despite all that could be offered, the cry: "What do I get for my four dollars?" is still abroad in the land. Until this issue of The JOVIAN, the dollars-and-cents direct-to-the-member return on Jovian dues could not be enjoyed by a sufficient number of Jovians to create those solid ranks of satisfaction in Jovianism which our ideal demanded.

PAGES EIGHTEEN AND NINETEEN!

READ WITH YOUR MIND!

PAGES EIGHTEEN AND NINETEEN

It has long been believed that the answer could be found in some form of insurance. During the past two years every conceivable insurance feature has been carefully analyzed by the Jovian Central Office, and one after the other rejected as impractical or undesirable.

These included the plan used by some organizations of arbitrarily adding a certain sum to each member's dues, and then giving him a certain kind of insurance policy whether it did or did not appeal to him. Entirely too autocratic for The Jovian Order.

Another reject was the plan of burial benefits provided by assessments. Insufficient in amount and indefinite in cost.

Still another was the class of accident insurance provided by several existing state associations at a minimum premium of nine dollars annually. The fact that exemption of certain classes of accidents is made in order to furnish the insurance at that rate, and that the insured is obligated to pay additional assessments if they become necessary, seems to make that form of policy undesirable for the purposes of the Order.

And then, six months ago, we headed in the right direction.

On pages eighteen and nineteen of this issue we give a brief release of the big, new feature that has been created for the benefit of goodstanding Jovians. It is far and away the biggest single advance that has ever been made in Jovianism for the advantage of the individual member, and we believe the biggest coup ever put over by any association for the direct gain of its members.

It has meant months and months of digging and hard work and we hope, most earnestly, will meet with the appreciation and support it merits.

We hope in that way because the plan is RIGHT; because every advantage claimed for it is THERE; because it will put money in the pocket of every Jovian who accepts it, and will make him at once and for all time that much-to-be-desired human,—a satisfied customer of Jovianism.

Please read pages eighteen and nineteen, and, for your own gain, ACT NOW.

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

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Past Jupiter Thirteen, Chicago, Ill.

THOS. A. WYNNE, Po. 11457V
Past Jupiter Fourteen, Indianapolis, Ind.

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CO-ORDINATED EFFORT THE COUNTRY'S NEED

IF THERE WAS EVER A NEED OF ORGANIZING THE ELECTRICAL INDUSTRY IT EXISTS TO-DAY

EVENTUALLY every nation, creed, branch of industry and faction into which the human race is divided will be brought together in the one common cause of self-preservation. According to the great thinkers of this and other ages we will be driven to it by the adversities that will evolve from changes in nature.

When the earth grows colder with age, the pulses of nature will slow up and the elements now contributed voluntarily to our existence will have to be supplied artificially.

Then will come the fight for life.

There will be no need of crying the word "co-operation" from the house tops; the issues that nature will raise will promote a unity of action.

But how about the need for co-operative action today? Nature has not yet brought adversity, but it is plainly evident that the human race is passing through one of the most critical periods of its existence. Although we of America are not fully awake to its significance, the end is not in sight and what may develop can not be forecasted.

It should be apparent to every business man in the country that there is a greater need than ever before for organized effort to meet the problems that confront us. That this deduction is particularly true of the electrical industry should be equally obvious. The part electricity is playing in the war should be of sufficient significance to bring all branches of the industry together in harmonious and co-ordinated effort. The part it will naturally take in the work of reconstruction that will follow the war is a task of sufficient magnitude to tax all branches of the industry, if working in an organized state, to the full limit of their strength.

These tasks that confront the nation, and subsequently the electrical industry, are not of a nature to be successfully met in an unorganized, haphazard manner. Concerted action, made possible by a knowledge of conditions, and information as to what is needed is essential. Costly mistakes and blunders can only be avoided by keeping posted concerning changes that are occurring in rapid succession.

A strong co-operative organization is of the utmost importance to cope with the situation. The Jovian Order has demonstrated its ability to render valuable assistance in movements of the past. That it can be made an instrumentality to avert wasteful expense by operating as a clearing house for information in the crisis that exists is patent. Its tenets of co-operation, and its promotion of unity can be made to greatly minimize harmful practices of opposition, contention and destructive competition, and the energy and capital thus saved directed toward constructive achievement.

If there was ever a need for the electrical industry as a whole to get together and work together it is now. There should be plenty of business for everybody. The important issue is to keep it going.

With the active co-operation of all the leading business concerns of the country (a majority of which it now has) The Jovian Order through its Leagues can be made a powerful factor for the purpose of promoting business.

Nor is the question of keeping business going one that concerns the electrical industry alone. It is of vital interest to the nation.

We of the electrical industry should see to it that the country does not suffer from any stagnation of our line of endeavor. We should unite to this end.

The time to act is in this period, when we may by efficient preparation eliminate preventable industrial accidents.

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"GINGER," THE NEW CHARTERED LEAGUE SERVICE

A NEW semi-monthly Jovian Central Office service, called "Ginger," inaugurated May 1, for the benefit of Chartered Leagues of the Order should have a far-reaching effect in building up those bodies.

In making this assertion we are not theorizing. The foundation for the statement is based upon the value of system and science. The system is that of gathering proven methods of organization and operation, assembling and distributing the knowledge in comprehensive and easily assimilated form. The purpose is to reduce the operations of the Leagues to a science.

The service as now established makes of the Central Offices of The Jovian Order an actual clearing house for plans, ideas, methods of operation and details of application. By this method any plan or idea originated or movement inaugurated by one League, together with the features that contributed to its success, as well as instructions concerning elements to be avoided, becomes the property of all of the Leagues.

Movements that have proved unsuccessful will also be analyzed for the purpose of showing why they failed, to prevent repetition of the failure by other Leagues.

It has long been known that there existed a need of standardizing Jovian League activities. This was apparent from the fact that similar movements were less successful in some Leagues than in others, although an equal amount of effort was contributed. In a number of instances this was obvious even where the natural advantages were equal, and in some cases where they apparently favored the less successful.

Naturally, therefore, the only cause to which to attribute the lack of success was the failure to make use of all of the possible beneficial features. So the Central Offices of the Order set about devising a means of supplying information that would enable Leagues to utilize every advantageous element and to avoid harmful practices.

As no other feature is so essential to the success of the activities of any body as its proper organization, this is made the basis of the first issue of "Ginger." A model method of organization, outlining the important points that contribute to its effectiveness is given in a brief but comprehensive manner.

The slogan of "Ginger," if it may be termed a slogan, is: "A Service to be Useful Must be Used."

A great deal of information "Ginger" will contain has been accumulating in the Central Offices for some time. Heretofore it has been supplied only to Leagues and members who requested it, and its circulation, therefore, has been limited.

Now it is in a form convincingly effective, and furnishes one more tangible benefit of high intrinsic value co-incident with Jovian affiliation.

* * * *

OFFICERS ELECTED AT THE SOUTHWESTERN ELECTRICAL AND GAS ASSOCIATION CONVENTION

THE THIRTEENTH annual convention of the Southwestern Electrical and Gas Association was held at the Adolphus Hotel in Dallas, Texas, April 26 to 28. Not only was the meeting one of the most successful, it was also one of the most enthusiastic ever held by the association.

There were over 300 members registered at the convention, which was presided over by President F. R. Slater.

John R. Babcock, secretary to the president of the Dallas Chamber of Commerce, delivered the address of welcome to the delegates.

At the election held on April 28, the following officers and committeemen were elected:

H. C. Morris, Dallas, president; D. A. Hegarty, Po. 9208, Houston, vice-president; W. A. Sullivan, Po. 13038, Shreveport, La., second vice-president; Burr Martin, Po. 10657, Dallas, third vice-president; H. S. Cooper, Po. 365, secretary, and J. B. Walker, Po. 10692, treasurer.

Executive Committee

F. R. Slater, Dallas; H. C. Morris, Dallas; D. A. Hegarty, Po. 9208, Houston; W. A. Sullivan, Po. 13038, Shreveport, La.; Burr Martin, Po. 10657, Dallas; H. S. Cooper, Po. 365, Dallas.

Hold-over (one year to serve): G. H. Clifford, Po. 1044, Fort Worth; F. J. Storm, Amarillo; W. B. Tuttle, Po. 1031, San Antonio, and W. B. Head, Po. 139, Dallas. Two-year term: R. Meriwether, Dallas; J. C. Kennedy, Po. 14472, Breham; E. S. Fletcher, Dallas, and S. R. Bertron, Po. 14416, Houston.

Advisory Committee

B. F. Cherry, Weatherford; A. Patterson, Po. 13916, Texarkana; W. W. Holden, San Antonio; F. D. Murphy, Houston; Alba H. Warren, Po. 3273, Galveston; D. G. Fisher, Po. 2173, Dallas; Jas. P. Griffin, Po. 2177, Dallas; F. H. Matthes, Abilene; R. J. Irvine, Po. 6251, San Angelo; H. S. Potter, El Paso; J. W. Carpenter, Po. 1320, Corsicana; R. C. Brooks, Po. 10877, Dallas; J. E. Cowles, Po. 1549V, Shreveport, La.; F. M. Lege, Jr., Po. 131, Galveston; A. V. Wainwright, Po. 8537, Abeline; F. N. Lawton, Wichita Falls; P. A. Rogers, Po. 1027, Denison; V. W. Berry, Po. 1006, Fort Worth; B. G. Soper, Dallas; R. C. Jones, San Antonio; R. W. Van Valkenburgh, Po. 1302, Dallas; C. W. Davis, Po. 58; H. E. Hobson, Po. 56; F. G. Kune and C. A. Newning, Po. 2V, Dallas.

Finance Committee

C. E. Calder, Po. 12078; R. J. Soper, D. G. Fisher, Po. 2173, Dallas.

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Webster says it means: "To goad or impregnate with ginger (hot stuff). To make lively, mettlesome and animated; to inspirit."

JOVIAN LEAGUE

Ginger

Mailed on the first and fifteenth of each month to each chartered Jovian League.

Filled with gingerful suggestions and plans for activities that will put the "pep" and the punch in any League.

THIS IS AN IMPORTANT FEATURE

OF

Jovian Central Office Service

IT IS SENT ONLY TO CHARTERED LEAGUES

To Be Useful It Must Be Used!

THE JOVIAN ORDER

SYNDICATE TRUST BUILDING — SAINT LOUIS

Cover design of the new "Ginger" service for Chartered Leagues. A service that will reduce the operations of all the Chartered Leagues of the Order to a science.

CHARTERED

JOVIAN LEAGUES

Cincinnati	Charter	No. 1
Kansas City, Missouri	"	No. 2
Pittsburgh	"	No. 3
Minneapolis	"	No. 4
St. Joseph, Missouri	"	No. 5
Louisville, Kentucky,	"	No. 6
Stark County Jovian League Comprising the towns of Massillon, Canton and Alliance, Ohio.	"	No. 7
Tulsa, Okla.	"	No. 8
Eau Claire, Wis.	"	No. 9
Harrisburg, Pa.	"	No. 10
Wichita, Kan.	"	No. 11
Winnipeg, Man.	"	No. 12
Bay City, Mich.	"	No. 13
Milwaukee, Wis.	"	No. 14
Port Arthur, AND Fort William, Ont.	"	No. 15
Oklahoma City	"	No. 16
Galveston, Texas	"	No. 17
Muskogee, Okla.	"	No. 18
Richland and Ashland Counties, O.	"	No. 19
St. Louis, Mo.	"	No. 20

More Are Coming!!!

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Personal Pointers

The friends of childhood's happy days
Are scatter'd by the hand of Fate,
And oft we lose them in the maze
Of busy marts in life's estate.
Tho' years go by, in memory
We cling to those we held most dear—
Would it not bring sweet reverie
To find an old acquaintance here?

* * * *

C. C. Bartlett, Po. 4878, superintendent, Corona Gas & Electric Company, Corona, Cal., has been commissioned first lieutenant in the Engineers' Officers' Reserve Corps.

* * * *

Ira J. Francis, Po. 1628, formerly manager of John A. Roebling's Sons Company at Los Angeles, Cal., has been made manager of the San Francisco office of that company.

HARRY J. HORNING, Po. 5370, purchasing agent, credit manager and secretary, Fullerton Electric Company of New York and Scranton, who has been active in Jovian affairs in New Jersey. Jovian Horning takes the part of Hercules on both the New York and the Newark Degree Teams.

Louis A. Ferguson, Po. 12249, vice-president of the Commonwealth Edison Company, Chicago, Ill., has been elected vice-president of the Chicago Commercial Club.

* * * *

J. M. Morris, Po. 10759, of the Westinghouse Electric & Manufacturing Company, Los Angeles, has received a commission as captain in the Engineers' Officers' Reserve Corps.

* * * *

Lewis A. McArthur, Po. 7786, formerly assistant general manager of the Pacific Power & Light Company, Portland, Ore., was recently made general manager of that company.

* * * *

J. N. Moncrieff, Po. 17145, has resigned as manager of the Wisconsin-Minnesota properties at La Crosse, Wis., to accept an executive position with a New York utilities company.

NORMAN B. HICKOX, Po. 7881, Statesman-at-Large, has been made advertising manager of the National X-Ray Reflector Company, with headquarters at the main office of the company in Chicago. He assumes the duties of the publicity department in addition to those of special representative of Augustus D. Curtis, Po. 12933, president of the company, and the work of sales promotion. Jovian Hickox, is an active member of the Chicago Electric Club Jovian League, the National Electric Light Association and the Illuminating Engineering Society. He has been an enthusiastic worker for Jovianism since his affiliation with the Order.

H. E. Bittman, Po. 7712, has resigned as secretary of the Telephone & Electric Equipment Company, San Francisco, and is now secretary of the Aylesworth Agencies Company in that city.

* * * *

H. C. Schimpff, Po. 13170, of the Illinois Traction System, who was formerly traveling representative of the company, has been made manager of its commercial department with headquarters at Peoria, Ill.

* * * *

Hill Griffith, Po. 18661, formerly manager, advertising service Society for Electrical Development, New York City, a first lieutenant in the Officers' Reserve Corps, has been called into active service.

* * * *

P. D. Kline, Po. 5879, until recently general manager of the Ogden Rapid Transit Company, Ogden, Utah, is now manager of the Wisconsin-Minnesota Light & Power Company's utility properties at La Crosse, Wis.

* * * *

Stanley M. Tracy, Po. 18826, who was formerly district manager at Chicago for the Driver-Harris Wire Company, has been appointed assistant sales manager of the firm with headquarters at Harrison, N. J.

* * * *

Frank M. Hawkins, Po. 1192, managing representative, Crouse-Hinds Company in New York for a number of years, has retired from active sales work and will investigate business conditions and possibilities abroad for the firm.

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LAWRENCE E. CAVANAUGH, Po. 15526, president of the Southwestern Michigan Jovian League, of Benton Harbor, Mich. In answer to the call to arms Jovian Cavanaugh joined the Fourth Division, Michigan Naval Brigade, and is now on board the U. S. S. Massachusetts, somewhere on the Atlantic Ocean.

G. D. LONGMUIR, Po. 14727, has entered business for himself, being one of the incorporators of the Reliance Electric Company, Tacoma, Wash. He was until recently manager of the Pacific Power & Light Company, at Pasco, Wash.

* * * *

ERNEST VANARSDEL, Po. 13673, recently resigned his position with the Kentucky Utilities Company at Shelbyville, Ky., and is now connected with the operating department of the Interstate Public Service Company, at Indianapolis, Ind.

* * * *

C. H. HOLDEN, Po. 12795, until recently sales manager of the P. R. Manufacturing Company, Detroit, Mich., is now central district manager for Edwards & Company, Inc., New York. His headquarters are 9 South Clinton Street, Chicago.

* * * *

R. A. ADAMS, Po. 10482, connected with the Oklahoma City office of the Western Electric Company, was recently married to Miss Elizabeth M. Walker of Coronado, Cal. Jovian Adams and his bride will make their home in Oklahoma City.

* * * *

E. E. NELSON, Po. 1025, who has been connected with the Northern Traction Company, Fort Worth, Texas, as electrical engineer, has resigned that position, and is now with the Adirondack Electric Power Corporation, at Utica, N. Y.

* * * *

GEORGE PATTERSON, Po. 733, of Stanley & Patterson, electrical jobbers, New York City, is to be married in June. The bride to be is Miss Catherine Tinker, of Hartford, Conn. Jovian Patterson is a widower, his first wife having died two years ago.

* * * *

ARTHUR E. LUBECK, Po. 6558, has been appointed manager of the Detroit office just opened by the Benjamin Electric Manufacturing Company. Jovian Lubeck has been sales representative of the company at Chicago for the past several years.

* * * *

SAMUEL INSULL, (Honorary) President of the Commonwealth Edison Company, Chicago, was recently appointed chairman of the Illinois Council for Defense. He will assist in directing the plans for assembling the industrial resources of the state.

* * * *

SAMUEL H. TAYLOR, Po. 999, representative of the Electric Railway & Manufacturers Supply Company, Oakland, Cal., was elected chairman of the Electrical Supply Jobbers' Association at the recent meeting of the organization at Del Monte, Cal.

* * * *

ARCH M. JOHNSON, Po. 12291, formerly connected with the Seattle, Wash., office of the John Roebling Sons Company, has been transferred to St. Louis, Mo. His headquarters will be at the company's office, 544 Frisco Building, in the latter city.

* * * *

JAMES COLKITT, Po. 2627, salesman for John A. Roebling's Sons Company, has been promoted to the position of manager of the Los Angeles, Cal., office of the company. He succeeds IRA J. FRANCIS, Po. 1628, who has been transferred to San Francisco.

* * * *

FRANK J. DIX, Po. 6157, formerly chief electrician of the muncipal electric lighting plant, Fort Wayne, Ind., has been appointed secretary-manager of that utility during the absence of JOHN W. WESSEL, Po. 15259, who has enlisted in the United States Army.

* * * *

JAS. J. COONEY, Po. 13184, has been appointed assistant new business manager of the Toledo (Ohio) Railways & Light Company. He succeeds L. J. LEMEN, Po. 13195, who has been promoted to the New York City offices of Henry L. Doherty & Company.

* * * *

E. W. DONOHO, Po. 6049, Fifteenth Argus, of Landers, Frary & Clark Company, Chicago, announces the advent, May 8, at his home, of a future member of the Order. John Willoughby Donoho, is the signature the young gentleman will affix to his application.

* * * *

A. H. SWEETMAN, Po. 3611, formerly connected with the engineering department of the Commonwealth Edison Company, Chicago, is now connected with the Stone & Webster Engineering Corporation. His headquarters will be at the Boston offices of the company.

* * * *

A. B. PATERSON, Po. 14044, who until recently was manager of the Meridian (Miss.) Light & Railway Company, has resigned from that position and is now representative of Henry L. Doherty & Company, bond department, in New Orleans and adjacent territory.

A DOLLAR - AND - CENTS DIRECT-TO - YOU RETURN ON YOUR JOVIAN DUES!

READ PAGES EIGHTEEN AND NINETEEN.

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ARTHUR C. GARRISON AND ERNEST H. HAUGHTON

TELEGRAPHED THEIR APPLICATIONS FOR JOVIAN INSURANCE POLICIES DESCRIBED ON PAGES EIGHTEEN-NINETEEN. "LIVE ONES" ALIVE TO A "LIVE" PROPOSITION!

W. L. WESTON, Po. 2215, for the past several years local manager of the Paducah (Ky.) Light & Power Company and the Paducah Traction Company, has been transferred to Houghton, Mich., where he assumes the management of the Stone & Webster properties.

* * * *

G. V. WEIR, Po. 17290, of Agens & Company, jobbers, Newark, N. J., has been called to the colors, and is now a captain in the U. S. Army. He has been assigned to Fort Myer, and is at present drilling recruits for the Fourth Company Infantry, Officers' Reserve Corps.

* * * *

J. N. PERRY, Po. 6899, formerly a member of the electrical engineering firm of Perry & Sterrett, Washington, D. C., is now in charge of the new branch of The Burke Electric Company, of Erie, Pa., recently opened at 424 Union Trust Building, Washington.

* * * *

A. N. RICHARDSON, Po. 16577, and GORDON WEAVER, Po. 3851, formerly with the Kansas City Light & Power Company, Kansas City, have severed their connection with that company and are now with the Union Electric Light & Power Company, at Webster Groves, Mo.

* * * *

C. H. HOLDEN, Po. 12795, has been appointed central district manager for Edwards & Company, Inc., of New York City, with headquarters at 9 South Clinton Street, Chicago, Ill. He was formerly sales manager for the P. H. Manufacturing Company, Detroit, Mich.

* * * *

HARRY C. TURNOCK, Po. 5658V, president and general manager Electric Construction & Sales Company, Cleveland, has enlisted in the Officers' Reserve Corps, and E. A. BRUNSWICK, Po. 9658, of the Western Electric Company, Cleveland, has enlisted in the Coast Artillery.

* * * *

E. H. MARTINGALE, Po. 7287, of the engineering staff of the National Carbon Company, Cleveland, was one of the four managers elected to the board of directors of the American Institute of Engineers at the annual business meeting of that body in New York City, May 18.

* * * *

R. R. CASKEY, Po. 10885, manager of the Chicago offices of The Robbins & Myers Company, announces the removal of his offices from 320 Monadnock Block to 1444-46-48 Conway Building. The new offices provide improved facilities for handling the increasing business of the company.

* * * *

F. A. OTTO, Po. 6085, has been made general manager and secretary-treasurer of the Minnesota Gas & Electric Company at Albert Lea, Minn., succeeding Ludwig Kemper, resigned. He was formerly superintendent of the electrical department of the St. Paul (Minn.) Gas Light Company.

* * * *

W. D'A. RYAN, Po. 439, engineer in charge of illumination of the Panama-Pacific Exposition and the San Francisco Path of Gold celebration, was recently presented with a beautiful loving cup, through the San Francisco Call, in appreciation of his contributions to civic life in San Francisco.

* * * *

EDWARD S. MARSHALL, Po. 6646, formerly manager of the railroad department, the Pierce-Fordyce Oil Association, Dallas, Texas, is now manager of the lubricating department of the firm. According to reports, he will divide his time between the Dallas and St. Louis offices of the company.

* * * *

L. B. HERRINGTON, Po. 13654, Richmond, Ky., was recently elected vice-president of the Kentucky Utilities Company. Jovian Herrington has been engaged in the electrical industry since 1905. He built the station at Richmond, and later became president of the Richmond Electric & Power Company.

* * * *

HOWARD N. BATES, Po. 1919, for many years connected with the commercial department of the Houston Lighting & Power Company, Houston, Texas, has accepted a position as commercial manager of the Public Service Corporation at Tulsa, Okla., and has removed with his family to the latter city.

* * * *

C. R. YOUNG, Po. 11246, secretary to the vice-president of the Pacific Power & Light Company, Portland, Ore., has been promoted to the position of sales manager of the company. Jovian Young has been with the company since 1911, filling various positions in the purchasing, sales and operating departments.

* * * *

E. J. BILLINGS, Po. 18148, has been made general efficiency engineer by Henry L. Doherty & Company, of New York City. Jovian Billings was promoted from the position of superintendent of power of the St. Joseph (Mo.) Railway, Light, Heat & Power Company, one of the Henry L. Doherty & Company properties.

* * * *

S. H. WALLACE, Po. 9090, assistant secretary of the St. Louis County Gas Company, Webster Groves, Mo., has been made secretary of the Savings & Loan Association of the Electric Company, which is a reorganization of the Union Electric Light & Power Company of St. Louis and the St. Louis County Gas Company.

* * * *

WM. BRADFORD, Po. 9926, recently resigned his position as engineer of the Laclede Gas Light Company, St. Louis, Mo., and organized a new company known as the Engineering Service Corporation. Jovian Bradford is vice-president and general manager of the corporation, which has offices at 1982 Railway Exchange Building, St. Louis.

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FRANK M. HAWKINS, Po. 1192, has resigned as southeastern sales agent for the Crouse-Hinds Company, of 30 Church Street, New York City. Jovian Hawkins has been engaged in the electrical industry for about thirty-five years. He was connected with the Electrical Engineer & Supply Company that was succeeded by Crouse-Hinds Company.

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W. C. WOODLAND, Po. 14864, until recently chief engineer for the Packard Electric Company, Warren, Ohio, has accepted a position as consulting engineer with the Steere Engineering Company, Detroit, Mich. He will have charge of the company's electrical department, in addition to work in connection with its gas engineering business.

* * * *

JOHN P. PULLIAM, Po. 14003, who has been manager of the Wisconsin Electric Railway Company for the past ten years, has become connected with the Clement C. Smith interests which control the Wisconsin Railway, Light & Power Company of La Crosse and utilities at other points. Jovian Pulliam will make his headquarters at Milwaukee.

* * * *

S. H. M. AGENS, Po. 456, of Agens & Company, Newark, N. J., was elected president of the New Jersey Electrical Merchants Association at the meeting of that organization, May 4, at Newark. Jovian Agens served as Statesman for New Jersey during the Fourteenth Jovian Administration, and has been active in promoting the interests of the Order and the electrical industry.

* * * *

R. E. FOWLER, Po. 13299, has resigned as manager of the electric shop of the Union Gas & Electric Company of Cincinnati, and is now manager of the household appliance department of the Erner Electric Company, Cleveland, Ohio. Jovian Fowler was assistant commercial manager of the Louisville (Ky.) Gas & Electric Company before going with the Cincinnati company.

* * * *

BYRON C. FOWLES, Po. 13898, on May 1 was made general manager of the public utilities of Kingsport, Tenn., which include central station, water and sewerage systems. The Kingsport utilities are owned by the Equitable Securities Company of New York. Prior to May 1, Jovian Fowles was secretary-treasurer and general superintendent of the Pine Bluff (Ark.) Corporation.

* * * *

JOHN G. BARRY, Po. 5460, who has been manager of the General Electric Company's railway department at Schenectady for a number of years has been appointed general sales manager of the company. Jovian Barry was with the Thomson-Houston Company of Lynn, Mass., at the time of its consolidation with the General Electric Company. Shortly afterwards he was transferred to Schenectady.

* * * *

WM. G. CAMPBELL, Po. 2763, announces the removal of the offices of his firm, the Safety-Armorite Company, from Pittsburgh to 511 West Twenty-seventh Street, New York City, where they will be connected with the company's new warehouse. The other members of the firm who will make their headquarters at the new address are Victor F. Gates, Po. 1187, Wm. F. Dimelow and George Pettengill.

* * * *

SAMUEL SCHIMMEL, Po. 15070, and J. H. Schimmel, Po. 11883, proprietors of the Schimmel Electric Supply Company, Philadelphia, were hosts at a dinner given April 21 to employes of their firm. In addition to a splendid banquet, a surprise was sprung on their guests by the announcement that the firm would distribute bonuses amounting to $3,500.00, or 10 per cent of the salary of each employe during the past year.

* * * *

C. B. KENNEDYE, Po. 13814V, formerly connected with the industrial department of the Union Electric Light & Power Company, St. Louis, Mo., is now sales manager of the Light & Development Company of that city. Jovian Kennedye was awarded the degree of Vulcan in the recent "One Hundred Point Committee" work. He has also been active in promoting the interest of the Order in other ways since his affiliation in 1914.

WM. C. ANDERSON, Po. 4607, until recently manager of the Luzerne County (Pa.) Gas & Electric Company, Plymouth, Pa., is now statistical secretary of the National Electric Light Association, in charge of the bureau of information and statistics, a newly created department of the organization. Jovian Anderson has had an extensive experience in the electrical field that has equipped him to render a valuable service in his new position.

* * * *

A. B. WILSON, Po. 9549, manager of The A. B. Wilson Company, Cleveland, Ohio, announces the removal of the offices of his firm from 357 to 452-453 Leader-News Building. The change to more spacious quarters was made necessary by the increase of business of the company, which has developed from local representation to sole agencies for several companies, and the increase in their output of switch boxes, loom fasteners, etc., which they manufacture.

* * * *

RUSSELL H. BALLARD, Po. 14214, is president of the newly formed Pacific Coast Section of the National Electric Light Association. At the first annual convention of the section, held at Riverside, Cal., April 19 to 20, there was an unusually large attendance. Fifty-one electric light and power companies have been organized under Jovian Ballard's administration. The capital represented is approximately $500,000,000. During the past two years he has been vice-president of the National Electric Light Association. The unusually large attendance was a personal tribute to his leadership.

* * * *

T. E. COLLINS, Po. 9327, Fifteenth Comus, until recently sales manager of the Pacific Electric Manufacturing Company, has severed his connection with that firm to engage in the business of manufacturer's agent, in San Francisco. He is at present representative for J. H. Parker Porcelain Company, Parkersburg, W. Va., and Adams Bagnall Electric Company, Cleveland, and general sales agent for the Bowie Switch Company. Congressman Collins has been an active worker for the fraternity and has a wide acquaintance in electrical circles. The JOVIAN extends its best wishes for the success of his new venture.

* * * *

H. F. JACKSON, Po. 7731, general manager, Sierra & San Francisco Power Company, was elected president of the Pacific Coast Section of the N. E. L. A. at its recent convention. Upon the declaration of hostilities against Germany, Jovian Jackson, who served on the engineering staff of Generals Fitzhugh Lee and Leonard Wood during the Spanish-American war, placed his services at the disposal of the government. In addition to the engineering service he rendered in Cuba, he was a member of the board of officers who planned and carried out the army and navy maneuvers in connection with the defenses of Portland, Maine, in 1901. He is also a graduate of the government school of submarine defense. In 1905 he was made artillery engineer of defenses at Old Point Comfort, and was later transferred to Washington, as assistant to the chief of artillery.

* * * *

OBITUARY

MARK LOWD, Po. 2188, southwestern manager of the Stone & Webster Engineering Corporation, Dallas, Texas, died at his home in that city April 27, of pneumonia. He was ill only a few days his death occurring during the convention of the Southwestern Electrical and Gas Association of which he was a prominent member. The association passed resolutions of respect, copies of which, together with a beautiful floral design, were sent to his family. Jovian Lowd had been a member of the Order since May, 1909, having been initiated at a Rejuvenation held at Dallas. He was forty-seven years old, and is survived by a wife and two daughters, to whom The JOVIAN extends the sympathy and condolences of the fraternity.

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NEWS OF JOVIAN LEAGUES

San Francisco Captain Malone delivered an interesting address on "Coast Defense" before the Jovian League of San Francisco, at the Palace Hotel, April 18. Modern methods of range finding in coast defense was one of the important features he discussed.

Under a new ruling of the League two members were fined fifty cents for being late. The rule provides that the money from such fines is to be turned over to the Red Cross.

The meeting of April 25 was devoted to discussions of the work of the recent convention of the Pacific Coast Section of the N. E. L. A.

H. F. Jackson, Po. 7731, of the Sierre & San Francisco Power Company, took a prominent part in the discussion.

A. B. C. Dohrman made an eloquent appeal in behalf of the Red Cross.

John C. Froghliger gave an interesting talk on bees.

E. M. Cutting, Po 9333, presided as chairman of the meeting.

* * * *

Denver B. S. Manuel, Po. 1699, presided as chairman at a very interesting meeting, April 18. Col. Elwood W. Evans addressed the meeting, taking for his subject "With Pershing in Mexico."

The baseball committee made a report on arrangements for the "Electric Day" to be held at the ball park, April 25.

Report was made that a company had been formed for the engineering corps, and were drilling three times each week.

Forty members were in attendance.

Dr. David Shaw Duncan was the speaker May 5, addressing the meeting on ""Some Causes Leading Up To the European War."

First Tribune, A. F. Traver, Po. 2354, presided.

The attendance was sixty-five.

* * * *

Kansas City A number of important League matters were considered at the April meeting of the executive committee of the Kansas City League. One additional effort was authorized to collect delinquent dues. The secretary was authorized to drop the names from the League roster of those who failed to respond.

A committee was appointed to confer with Colonel Kealy concerning the matter of the League fathering one of the companies of the Third Missouri Regiment. The following members were assigned to the committee: H. W. Stigall, Po. 9588, chairman; F. B. Urig, Po. 1434, F. M. Bernardin, Po. 250-7, H. F. Lang, Po. 842, and H. W. Ritterhoff, Po. 16578.

E. L. Foutch, Po. 836, and C. F. Farley, Po. 1417, were appointed a committee to attend a dinner of the North Side Boosters at the Baltimore Hotel, April 23.

Arrangements were completed for the Rejuvenation to be held May 7. F. L. Funsten, Po. 3043, chairman of the ticket committee, started the distribution of tickets.

* * * *

Oklahoma City Discussion of arrangements for the coming Rejuvenation to be held May 12, occupied nearly the entire time of the luncheon meeting held at the Lee Hunckins Hotel, April 23

George W. Knox, Po. 18851, presided as chairman of the meeting.

The attendance was twenty-five.

* * * *

New York Hon. C. Yada, Japanese Consul-General, and Dr. T. Iyenaga, Ph.B., Ph.D., former professor political science, Waseda University, Tokyo, Secretary, Department of Foreign Affairs, were the speakers at the New York Jovian League luncheon, May 2. The subject of their discourse was "America and Japan."

P. T. DAVIES, Po. 8818, Fifteenth Chiron, Montreal, Canada, whose activities have been of great value in keeping Jovianism on the high plane the Fraternity has attained as an organization in Canada.

Some of the important features covered by the two eminent speakers were: "Resemblances of America and Japan in the positions they occupy," "The functions and duties they should fulfill," "The attitude they may possibly assume in the future peace conference," "General topics of interest in regard to Japan."

Announcement was made of the arrangement of a Jovian night at Billy Sunday's Tabernacle. Reservation of five hundred seats was made for the evening of May 20, for Jovians and their families.

* * * *

Peoria Sixty members were in attendance at the luncheon meeting of the Peoria League at Block & Kuhls Restaurant, May 5. Thomas Endsley, presided as chairman. The speakers were C. Block and Dr. Williamson. The former took for his subject "High Aims in Business," and the latter addressed the meeting on "Co-operation in Business."

The relief committee submitted a suggestion that the League give a regular amount to the Peoria War Association periodically.

A movement to aid the Signal Corps of Peoria was inaugurated by President Endsley.

The meeting was "Visitors' Day," and proved one of the most interesting of the year.

The Club agreed to donate all of the electric equipment needed by the Signal Enlisted Reserve Corps.

* * * *

Grand Rapids Martin J. Wolf, Po. 6027V, Fifteenth Ajax, addressed the Grand Rapids luncheon meeting, May 7, on the "Psychology of Human Characteristics."

C. J. Litscher, Po. 1868, presided as chairman and made an appeal to the members to aid in the local Red Cross work.

A movement was inaugurated to provide a weekly payment plan for employes to aid the Red Cross.

* * * *

Winnipeg The Winnipeg Jovian League continues its achievements in civic matters. At an executive meeting of the League held April 17, committees were appointed to formulate ways and means for the annual Jovian picnic and for a bowling tournament between the members of the Order, also to start the movement for an electric show to be held in the fall.

* * * *

Massillon, Ohio The project of lighting the Lincoln Highway, originated and launched by the Stark County Chartered Jovian League No. 7, is meeting with enthusiastic approval and support. The Massillon Advertising

ONE HUNDRED POINT COMMITTEE TROPHIES

The three cups awarded as prizes to cities whose committees collected the largest number of dues in proportion to their membership, in the recent "One Hundred Point Committee" contest. The cup in the center, donated by Reigning Jupiter Henry L. Doherty, Po. 3208-33, as a prize for cities whose Jovian membership was over three hundred, was won by Cleveland. The one at the left, donated by Mercury Ell C. Bennett, Po. 3932-13V, for cities whose membership was between one hundred and three hundred was won by Milwaukee. That at the right, donated by J. Robert Crouse, Po. 260-8V, for cities whose membership was over forty was awarded to Eau Claire, Wis.

Club, of which First Tribune O. A. Acuff, Po. 10590, is president, has appointed a committee to work in conjunction with the Canton Adcraft Club on a plan to advertise the project thoroughly.

Since the inauguration of the movement by the League, the following individuals, organizations and newspapers have joined their efforts to aid in its promotion: Chas. Strolberg, Mayor of Canton; Massillon Advertising Club; Canton Adcraft Club; Massillon Rotary Club; Massillon Chamber of Commerce; Alliance Review and Massillon Independent.

* * * *

Chicago April 12. the League was guest of the Chicago Telephone Company. at the company's dining room, 212 Washington Street. H. F. Hill, Po. 17422, vice-president, Central Group, Bell Telephone Company, was the speaker of the occasion.

"Reducing the High Cost of Forgetting" was the subject of an interesting address by William E. Miller, Chicago director of the Roth Memory Institute, April 26.

Announcement was made by the membership committee that fobs as prizes had been discontinued.

Martin J. Wolf, Po. 6027V, Fifteenth Ajax, addressed the meeting, May 3. He took for his subject "Humanics." Jovian Wolf embodied in his explanation of the term, in his usual clear and forceful manner, the subjects of religion, psychology, philosophy and modern business idealism.

Report of the acceptance of three new members was made by the board of managers.

Due to removal from the city after five years' association with the Club the following members were elected to Merit Membership: C. G. Tarkington, Pittsburgh; Edward Wray, Po. 7209, Springfield, Ill.; Ray Palmer, Po. 13163, New York; E. F. Kirkpatrick, Holland, Mich.; C. L. Hight, Po. 1163, New York; W. N. Matthews, Po. 494-44V, St. Louis; Abe Balsley, Viroqua, Wis.; W. D. Ray, Easton, Pa.; F. R. Farmer, Po. 655, Indianapolis, Ind.; H. F. Haviland, Po. 10927, New York, and M. G. Lloyd, Washington, D. C.

In response to an appeal by Secretary William C. Redfield, U. S Department of Commerce, President H. A. Mott, Po. 17507, appointed Fred M. Rosseland, R. I. Phillips, Po. 1091, and C. W. PenDell, Po. 3253, a committee to report upon ways and means in which the Club can co-operate with the Department of Commerce in increasing and conserving the country's food supply.

"Why a Food Law" was the subject of an address by John B. Newman, secretary, American Association of State and Federal Food Control Officials, May 10.

Announcement was made that Anthony Czarnecki, correspondent of the Chicago Daily News in Germany and Poland, would address the meeting May 24.

* * * *

St. Louis L. A. Wilson, president of the St. Louis Farm Mortgage Company, addressed the St. Louis Jovian League, April 17. Asserting that the "personal equation" is the predominating factor in business, he showed in a clear and forceful manner the value of personality and personal efficiency.

A. C. W. Brandt, Po. 11549, manager electric shop, Frank Adam Electric Company, presided as chairman of the meeting.

April 24 was flag day, and the occasion for a big patriotic demonstration.

Gen. S. L. Woodward, U. S. Army, retired, raised the new flag purchased for the occasion by the League, while the band of the First Missouri Regiment played patriotic airs.

Col. Isaac A. Hedges, Po. 10798, made a stirring address, taking for his subject "The Story of Our Flag."

J. H. Borgel, who was with Gen. Funston in the Philippines, and aided in the capture of Aguinaldo, included in his address a short sketch of that historical event.

The League held a joint meeting, May 1, with the Sales Managers' Bureau of the Chamber of Commerce and the Advertising Club.

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JUPITER HENRY L. DOHERTY AND EACH PAST JUPITER

HAS MADE APPLICATION FOR ONE OF THE JOVIAN POLICIES DESCRIBED ON PAGES EIGHTEEN - NINETEEN

Elliot Reid, Po. 12008, advertising manager, Westinghouse Electric Company, New York, delivered an interesting and instructive address on "Advertising and Selling Problems We Have Met."

C. A. Dostal, Po. 5759, district manager, Westinghouse Lamp Company, presided as chairman.

May 8 was Union Electric Light & Power day. The occasion brought an excellent attendance.

Frank D. Beardslee, Po. 3931V, Fourteenth Ajax, general sales manager of the company, presided as chairman of the meeting. He introduced as speakers the following officers of the company each of whom made short addresses from the experiences acquired in handling his department of the business: C. S. Ruffner, Po. 9955, vice-president; L. H. Egan, Po. 16557, general manager; Herman Spoehrer, Po. 3947, secretary-treasurer; John Hunter, Po. 7016, chief engineer of power plants; J. R. Portnell, Po. 11702, distribution engineer; H. W. Eals, Po. 9035, electrical engineer; John Abbink, Po. 14992, advertising manager, and C E. Michel, Po. 9061, office sales manager.

May 15 was President's day. President Frederic A. Kehl. Po. 9053, president of the Brilliant Sign Company, was in charge of arrangements.

Dr. J. W. Withe.s, superintendent of the St. Louis Board of Education, made one of the most interesting addresses of the year.

E. H. Waddington, Po. 5176V, presided as chairman of the meeting.

* * * *

Cleveland "Universal Service" was the subject of an address delivered before the Cleveland League, April 12. Major P. S. Bond, U. S. engineer, in charge of the Cleveland District, was the speaker.

Announcement was made of openings for a few salesmen capable of earning $3,000 a year or more.

Morris Black, former president of the Chamber of Commerce, and head of the City Planning Commission, addressed the meeting, April 26. His subject was "City Planning." Embodied in his address were some excellent ideas that should prove of great advantage.

It was announced that 1600 girls of the Bell Telephone Company were soliciting Red Cross subscriptions.

A complete list of all members who have joined the army or navy was requested by the secretary.

Worcester R. Warner, who was unable to fill his engagement two weeks previous, addressed the meeting, May 3, on the subject of "Astronomy." He gave some very interesting information concerning that science and what it was accomplishing. He also showed pictures of planets that had never been seen by the human eye, and a photograph of a canal that was partly constructed by inhabitants of another planet.

The date for the League picnic was announced as July 14. It will be held at Nela Park.

Rt. Rev. Msgr. T. C. O'Reilly, D. D., Vicar General of the Cleveland Diocese, was the speaker, May 10. His subject was "Know Thyself."

Joy S. Hurd officiated as chairman.

Los Angeles Frank M. Coker, Po. 14220, manager of the Coker Electric Supply Company, presided as chairman of the meeting of the League, April 18.

Chas. Lapworth, war correspondent, author and editor of the Los Angeles Graphic, delivered an interesting address entitled "A Zeppelin Night in a London Newspaper Office."

Frederic T. Woodman, mayor of Los Angeles, was the speaker of the day, April 25, taking for his subject "Municipal Affairs."

Harry N. Sessions, Po. 14356, First Tribune, presided as chairman of the meeting.

"The Penalties and the Reward of Taste" was the subject of an address, May 2, by Dr. Norman Bridge. Dr. Bridge is a constructive contributor to professional, commercial and literary publications.

E. P. Murphy, Po. 17075, was in charge of the meeting.

At the meeting of May 9, W. C. Morrell, Po. 16805, officiated as chairman, introducing as speaker Harry C. Donoho, superintendent of the Public Employment Bureau. Mr. Donoho made an interesting talk on "The Problem of Employment."

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BOOK REVIEW

"WIRING FOR LIGHT AND POWER," by Terrell Croft. 426 pages, 382 illustrations. Flexible binding. Published by the McGraw-Hill Book Company, New York City. Price, $2.00.

In his preface, the author explains that "the purpose of the book is to supply explanations, elaborations and illustrations for those sections of the National Electrical Code to which it is necessary to refer most frequently." It would appear that this volume will supply a demand which has long existed. As all electrical men who have had to deal, in one way or another, with the National Electrical Code appreciate, there are many statements in the Code that are difficult of interpretation, mainly because of the necessarily concise character of the Code text. Primarily, then, the book is a commentary on the National Electrical Code. However, it seems to go further than this and to comprise detailed directions for the installation of many different sorts of electrical apparatus and appliances.

"The "more important" portions of the National Electrical Code are printed verbatim in the book and then these extracts are explained with reading matter and illustrations by the author.

One feature of the book which impresses the reviewer is the character of the illustrations, which seem to have received considerable attention. In a book of this character significant illustrations which tell their own stories without the use of a lot of words are, obviously, an important feature.

After each of the Code sections is printed a series of questions relating to the matter in the preceding section. From an examination of these questions it would seem that these constitute a valuable addition and that any one, who can answer all of these queries correctly, will be well informed on the general subject of safe electrical installation. Any person who is interested in electrical work, safe wiring or fire prevention will, the reviewer feels, find this work a source of much valuable information which, insofar as we are aware, is not obtainable elsewhere.

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Look With

We Release Here The Announcement That We Are Prepared To Deliver That Which Has Long Been Asked Of The Jovian Order. We Have Investigated And Worked To Perfect This Plan For Nearly Two Years. We Know It Is Sound And All That We Claim It To Be. It Is —

Now Ready For You
A Dollar-And-Cents Direct-To-You Profit on Your Jovian Dues!

Read This Thoughtfully

WHAT IT MEANS IN MONEY TO YOU

AFTER TWO years of painstaking search and investigation we have completed an arrangement to provide for Jovians a tangible, direct return that in COUNTABLE, BANKABLE DOLLARS AND CENTS is several times the amount of the present annual dues of Four Dollars.

With this plan alone, laying aside all other Jovian advantages—

—the minimum, actual saving in MONEY because of Jovian membership is Thirteen Dollars;

—the maximum, actual saving in MONEY because of Jovian membership is Forty-one Dollars.

In other words, if you accept the minimum proposition offered—

—you can pay your Jovian dues of Four Dollars and still be Nine Dollars better off in pocket than if you were not a Jovian;

—if you accept the maximum proposition you can pay your Jovian dues and still be Thirty-seven Dollars better off in pocket than if you were not a Jovian.

Those are FACTS—they stand for one of the biggest coups ever engineered by any association for the direct money benefit of its members.

They stand for the final, convincing, satisfying answer to the question: "What do I get for my Four Dollars?"

THE PROPOSITION IN A NUT-SHELL

No. 1. Any Jovian in good-standing may by application to the Jovian Central Office now secure Accident Insurance, substantially identical with the Twenty-five-Dollar policies issued by the largest Accident Companies, upon payment of a premium of only Twelve Dollars,—net saving Thirteen Dollars.

No. 2. Or, in the same manner a Jovian may secure Health Insurance of a market value of Thirty-five Dollars for Twenty Dollars,—net saving Fifteen Dollars.

No. 3. Or, one Accident and one Health Policy,—net saving Twenty-eight Dollars.

No. 4. Or, two Accident Policies,—net saving Twenty-six Dollars.

No. 5. Or, two Accident and one Health Policy,—net saving Forty-one Dollars.

HOW APPLICATIONS ARE MADE AND POLICIES HANDLED

Application is made by a Jovian to the Jovian Central Office upon a simple form furnished Jovians upon request.

NO MEDICAL EXAMINATION IS REQUIRED

The insurance is placed with the Employers' Indemnity Corporation, a thoroughly reliable and financially substantial concern described hereinafter.

HOW THE SAVING IS EFFECTED

There is no mystery attached to the reason why this insurance can be sold to Jovians at so much less than it can be purchased in the open market. There is a REASON. It is NOT because the policies are not equally desirable. It is NOT because the Employers' Indemnity Corporation is writing this business without a reasonable profit.

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Your Mind!

The saving is made because the insurance is going direct from the insurance company to the individual MINUS ANY AGENTS' COMMISSIONS AND MINUS ANY OFFICE DETAIL EXPENSE. The Jovian Central Office, as a direct service to Jovians, is filling the place usually occupied by general and sub-agents and is taking care of office and collection details WITHOUT CHARGE.

Thus, this insurance is going direct from the source to the purchaser STRIPPED BARE OF EVERY EXPENSE save only adjustments, actual losses and a reasonable return to the insurance company.

THE COMPANY BACK OF THE POLICIES

The company writing this insurance (Employers' Indemnity Corporation) has a financial standing and a reputation for fair dealing that is second to none.

This is the company that is so successfully serving the National Electrical Contractors' Association members, and hundreds of utility companies, with liability and automobile insurance.

Here is what the chairman of the insurance committee of the contractors' association thinks after more than one year's experience with this company:

"Mr. Ell C. Bennett, Mercury.

"Dear Sir:—I congratulate you upon the arrangement The Jovian Order has perfected with Mr. Lynton T. Block's office (Employers' Indemnity Corporation) to offer to members of the Order Accident and Health Insurance at considerable reduction in standard rates.

"The National Electrical Contractors' Association for more than a year has been enabled through this company to offer to its members liability and automobile insurance at very attractive rates.

"Before making this arrangement with the company the N. E. C. A., through its insurance committee, of which the writer is chairman, made a careful investigation into the stability of the company, the personnel of its management and the merit of its plan. Doubtless you have done the same and will join with our committee that this organization is well entrenched financially and commercially, that Mr. Lynton T. Block and his associates are men of splendid integrity and ability who are building up a business of promise.

"Within the knowledge of our committee the service rendered by this company has been prompt and satisfactory and the financial saving has more than justified our arrangement.

"Without question this opportunity will be gratefully accepted by Jovians and should prove a tangible incentive which will greatly strengthen the membership.

(Signed) "Jos. A. Fowler, Chairman,
Insurance Committee of N. E. C. A."

THE POLICIES

Space here does not permit a complete schedule of all the benefits provided by these policies. Investigation will prove our assertion that they are substantially the same as any policies to be purchased elsewhere at approximately twice their cost.

The general provisions are exceedingly liberal. For example, they create a Jovian Board to hear any case of possible dispute.

The policies are written and lithographed especially for The Jovian Order (showing the Jovian emblems) and are purchasable only by Jovians in good standing.

These policies must not be confused with those issued by assessment companies and state associations. Those policies carry many exemptions and limitations of certain classes of accidents, and the insured is liable for assessment in addition to the premium.

There are no exemptions in the Jovian policies. You are fully covered regardless of the character of the accident or the circumstances surrounding it. There are no additional assessments or charges possible.

The annual premium of either the Accident or the Health Policy is payable in two or four installments if desired.

EVERY JOVIAN WHO WAS CONSULTED AS TO THE ADVISABILITY OF ADOPTING THIS PLAN FOR THE ORDER IMMEDIATELY FILED APPLICATION FOR AT LEAST ONE POLICY—THIS INCLUDES JUPITER DOHERTY AND EVERY PAST JUPITER. YOU CAN NOT AFFORD TO BE WITHOUT THIS CLASS OF INSURANCE. YOU CAN NOT AFFORD TO DISREGARD THIS SAVING OF REAL MONEY TODAY WHEN YOU MUST MAKE EVERY DOLLAR DO ITS FULL DUTY. YOU HAVE ASKED FOR A DIRECT RETURN ON YOUR JOVIAN DUES. HERE IT IS. IT IS NOW UP TO YOU!

REGARDLESS OF WHETHER YOU ARE CARRYING OTHER ACCIDENT AND HEALTH INSURANCE OR NEVER HAVE—

THIS IS YOUR OPPORTUNITY— IT REQUIRES FAST ACTION

TO-DAY — NOW — WRITE FOR COMPLETE INFORMATION TO

The Jovian Order

SYNDICATE TRUST BUILDING, ST. LOUIS

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A PATRIOTIC DUTY—
BUY A LIBERTY BOND

LIBERTY LOAN UNITED STATES Government Bonds

What the Bonds Are

Our Government, the richest nation on earth and the one with the smallest percentage of indebtedness, is offering its own people an opportunity to invest in its own bonds—the safest securities on earth—at a net interest yield of 3½% per annum.

A Liberty Loan Bond is something that every American citizen can and should own. Its ownership is proof to you and yours that you did your bit when America struck her blow against invasive war and for universal peace and freedom. Demonstrate your patriotism by enlisting your dollars.

What the Bonds Are For.

The money subscribed for Liberty Loan Bonds will be used in arming, feeding, clothing and paying the soldiers, the "jackies" and the marines and in aiding our Allies.

It will be spent in the United States, some of it by our Allies, some of it by our own Government. Practically every dollar of it will go to Americans for American goods or American service.

How to Buy a Bond

There is no red tape connected with buying it. The Liberty Loan Bonds will be issued in denominations as low as $50. You can invest through any bank $50, $100, $500, or as many $1,000's as you desire.

Your bond will be dated June 15th and it is your Government's binding pledge to pay you the principal when it is due and, on December 15th and June 15th of each year, interest at the rate of 3½% until the bond is paid. You can sell a Government bond at any time. Your name need not appear upon it and it is to all intents and purposes as good as money except that it earns more money every day. These bonds mature in thirty years—the Government reserving the privilege of redeeming them after fifteen years.

Wear a Liberty Button

The buyer of each Liberty Loan Bond, however small the amount, will be given a button which will show that its wearer stepped to the front when Columbia called for volunteers. Most of the people you meet will be wearing these buttons and you'll want to wear one too.

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On June 28.....	9.00	18.00	90.00	180.00
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On August 15.....	15.00	30.00	150.00	300.00
On August 30.....	15.00	30.00	150.00	300.00
	$50.00	$100.00	$500.00	$1,000.00

Plus accrued interest to be settled with final payment August 30.

THE DUES OF ALL JOVIANS

In the Military Service of the United States or of any of the allies of our country

Will be Cancelled During the War

Those Jovians will be carried on an honor membership roll without cost to them.

Their cards, magazines, and other Jovian material will be sent to them at the front and elsewhere, whenever possible.

See that the names of your Jovian friends who enter the service are sent to the Jovian Central Office.

The Jovian Order

SYNDICATE TRUST BUILDING

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APRIL REJUVENATIONS

BATTLE CREEK, MICHIGAN

ELKS TEMPLE, Battle Creek, Michigan, was the scene of the Rejuvenation held in that city April 3. Forty-two members of the Order were on hand to participate in enlightening the two candidates concerning the dangerous way up the slopes of Mount Olympus.

Among others present to assist in the function were Statesman-at-Large W. E. Bischoff, Po. 3190, and Wm. Soffe, Po. 11012, both of Chicago.

First Tribune, J. F. Raynes, Po. 13965, presided at the banquet, which was enlivened by music rendered by Davidson's orchestra, a boxing match and singing by colored performers.

Those who deserve special mention, according to reports, for their activity in connection with the affair are: Wm. Soffe, Po. 11012 and E. F. Rhod, Po. 8958.

The Degree Team was composed of the following members: Jupiter, C. J. McDonald, Po. 18472; Neptune, Solon Webb, Po. 15161; Pluto, E. F. Rhod, Po. 8958; Vulcan, J. F. Raynes, Po. 13965; Mercury, A. Schwenk, Po. 4515; Hercules, John J. Kenney, Po. 11289; Mars, W. E. Bischoff, Po. 3190; Apollo, H. G. Crippen, Po. 10090; Avrenim, R. G. Dresser, Po. 13061; Imps, Norman Brush, Po. 11198, E. G. Austin, Po. 15151 and Chas. Finley, Po. 13956.

* * * *

NEW BRAUNFELS, TEXAS

SEVENTY-SEVEN members of the Order assembled at Landa Park, New Braunfels, Texas, on the evening of April 14, to participate in the function of bringing eight wandering satellites into harmony with the revolving planetary system.

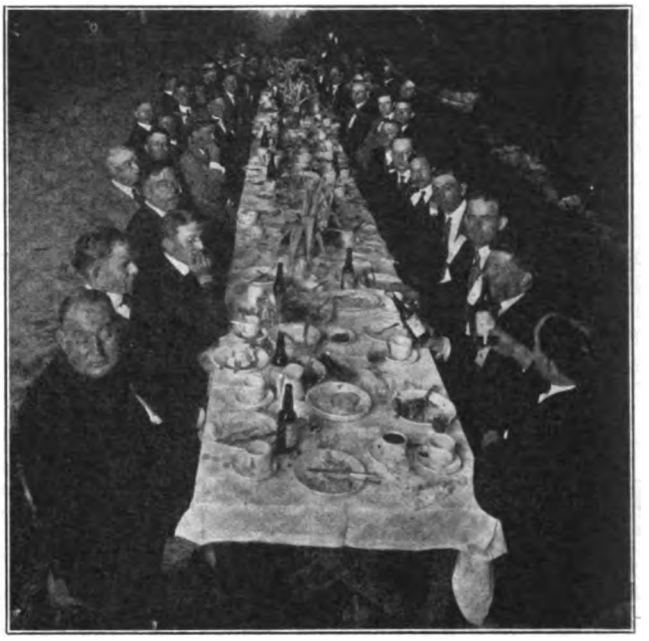
Among those in attendance in addition to the local members were: Mayor Alivis, of New Braunfels, R. E. McKie, H. G. Ross, Po. 4034, Frank G. Scovill, Po. 17, San Antonio; R. S. Wakefield, Po. 2606, First Tribune, Dallas; M. F. Sterett, Po. 93, Ninth Hercules and R. F. Bacon, Po. 2580, Austin.

First Tribune, George B. Smith, Po. 6649, was in charge of the candidates. Frank E. Scovill, Po. 17, presided as toastmaster of the banquet.

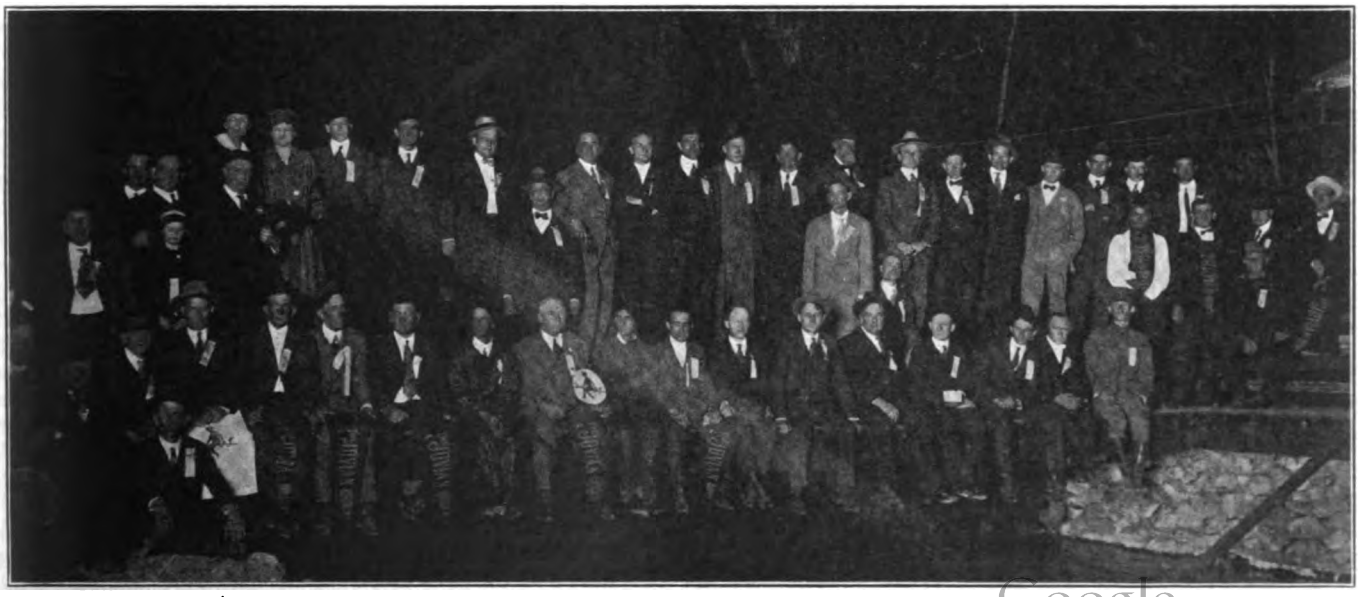
The following speakers addressed the members and candidates at the Joviation: Malcolm F. Sterett, Po. 93, Ninth Hercules; R. S. Wakefield, Po. 2606; R. E. McKie, Mayor, Alivis Adolph Seidman and R. F. Bacon, Po. 2580.

From reports received members who deserve special mention for their efforts in contributing to the success of the affair are: Chas. Gillespie, Po. 10914, S. M. Jett, Po. 16779, S. V. Patrick, Po. 1933; W. S. Haythorne, Po. 6636; Fred J. Backman, Po. 16777 and G. B. Smith, Po. 6649.

The Degree Team that brought the wandering satellites to the great state of co-operative revolution are: Jupiter R. S. Wakefield, Po. 2606; Neptune, Frank E. Scovill, Po. 17; Pluto W. H. Braning, Po. 6624; Mercury Chas. Gillespie, Po. 10914; Hercules Fred J. Backman, Po. 16777; Mars H. S. Wharton, Po. 6613; Apollo G. B. Smith, Po. 6649; Avrenim J. C. Kenney, Po. 1017; Imps, R. F. Bacon, Po. 2580; J. G. Cummings, Po. 4008; W. S. Haythorne, Po. 6636 and S. V. Patrick, Po. 1933.



New Braunfels Banquet



Included in this group taken at the New Braunfels, Texas, Rejuvenation, are Jovians from nearly every quarter of the Lone Star State

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DALLAS, TEXAS

QUOTING from the Southwestern Electrician, which has the happy faculty of catching the spirit of all functions electrical in its domain: "Old glories of the Jovian Order were revived under the magic wand wielded by First Tribune, Robert S. Wakefield, Po. 2606, when on Friday night (April 27), he placed upon the magnificent stage of the Scottish Rite Cathedral at Dallas, one of the best demonstrations of the ritual which has ever been presented."

To the work of the Degree Team and the untiring efforts of the local officers and members may be assigned much credit for the impressive manner in which the Rejuvenation was handled.

The large attendance may be attributed to two causes; the convention of the Southwestern Electric & Gas Association and the renewed interest in evidence in Jovian affairs.

There was a cabaret performance at the conclusion of the affair, to contribute to the enjoyment of the occasion.

The candidates numbered twenty-one. Among them were Prof. J. M. Bryant, professor electrical engineering, University of Texas and Lester B. Gottschall, representative Buckeye Lamp Division, National Lamp Works.

Among the notable Jovians present as guests were: Chas. A. Newning, Po. 2, Past Jupiter Four, Houston; J. F. Strickland, Po. 30, Third Hercules, Dallas; J. L. Stephens, Po. 88, Fifth Mars and G. H. Cushman, Po. 62, San Antonio.

The Degree Team: Jupiter Claude G. Matthews, Po. 10662; Neptune, W. L. Dowell, Po. 12090; Pluto, George H. Preston, Po. 16421; Vulcan J. E. Coad, Po. 12082; Mercury T. A. Hunter, Po. 6015; Hercules, F. B. Shannon, Po. 12132; Mars, J. H. Gilbert, Po. 7076; Apollo, G. E. Warner, Po. 15039; Avrenim, A. E. Warner, Po. 6024; Imps, L. V. Nogueria, Po. 132; G. A. Coffey, Po. 9596; L. M. Taylor, Po. 1022; L. E. Aschner, Po. 12073 and R. S. Christy, Po. 12081.

* * * *

LA CROSSE, WISCONSIN

FOUR new members were added to the Order at the Rejuvenation held at Frosinn Hall, La Crosse, Wis., on the evening of April 19. P. R. Linker, Po. 14302, First Tribune, was in charge of the proceedings and officiated as toastmaster at the Joviation which was held at John Stephen's Inn, after the ceremony.

Noticeable among the guests at the Joviation were Dean Treat, manager LaCrosse Street Railway Company; W. R. Patton, Po. 1090, Fourteenth Argus, Milwaukee, and Sofus Damm, Po. 18246, Eau Claire, Wis.

Jovians Patton and Damm made addresses to the members and were followed by H. H. Long, Po. 14303.

Songs by the Jovian Glee Club furnished one of the enjoyable features of the affair.

Members, who from reports, took an active part in the work of making the function a success were: Frank H. Evans, Po. 14301; Wm. F. Benton, Po. 14299 and Frank Pitman.

The personnel of the Degree Team was as follows: Jupiter, W. F. Benton, Po. 14299; Neptune, Ralph Sorenson, Po. 19387; Pluto, Fred K. Evans, Po. 14301; Vulcan, W. R. Patton, Po. 1090; A. W. Miller, Po. 14902; Hercules, H. H. Long, Po. 14303; Mars, P. R. Linker, Po. 14302; Apollo, J. H. Parsons, Po. 17146 and Avrenim, A. O. Colby, Po. 14300.

* * * *

MANSFIELD, OHIO

INCLUDED among the twenty-two candidates initiated at the Rejuvenation held at Mansfield, Ohio, April 13, was the Mayor of the City, G. H. Lowery and Secretary of the Chamber of Commerce, C. S. Williams. The affair, which was held at Eagles Hall was replete with Jovian enthusiasm, both the Rejuvenation, and the banquet proving enjoyable functions.

A spirit of patriotism was also in evidence. The members passing a resolution recommending that the Jovian Order offer its services to the country. As soon as the resolution was passed it was wired to Jupiter Henry L. Doherty at New York.

In addition to the candidates and members of the local league there were a number of visitors from other cities. Prominent among whom were: J. M. Bateman, Po. 2610V, First Tribune, Cleveland, and W. H. Bloss, Po. 13469, of Indianapolis.

First Tribune, Frank C. Poling, Po. 15317V, was in charge of the candidates and E. F. Wickwire, Po. 15431 presided as toastmaster.

Those who responded to the chairman's call for addresses were: J. M. Bateman, Po. 2610V, C. H. Lowery, C. S. Williams and R. E. Burger, candidates and W. H. Bloss, Po. 13469.

According to reports those who deserve special mention for their activities in connection with the affair are: Jas. L. Stone, Po. 19724; W. O. Custer, Po. 6246, E. F. Wickwire, Po. 15457; R. V. Cairns, Po. 15457; C. J. Blair, Po. 15425; Scott Robeson, Po. 13200; Jos. Parrott, Po. 19723; R. F. Wise, Po. 15432; C. C. Beck, Po. 15839; E. R. Hurlman, Po. 15428 and W. C. Starkey, Po. 15840.

The following Degree Team officiated: Jupiter J. M. Bateman, Po. 2610V; Neptune Russell Harter, Po. 14375; Pluto, R. F. Wise Po. 15432; Vulcan C. C. Black, Po. 15537; Mercury Fred W. Godfrey, Po. 271; Hercules H. S. Robeson, Po. 13200; Mars Jas. Mulrain, Po. 14387; Apollo V. L. Blanchard, Po. 10619; Avrenim F. C. Poling, Po. 15317V; Imps, Carl Baehr, Po. 3794; W. O. Johnston, Po. 14381; W. O. Custer, Po. 6257 and Jos. Parrott, Po. 19723.

* * * *

TULSA, OKLAHOMA

THAT E. A. Wilcox, Po. 6830V, First Tribune, with jurisdiction over the Jovian elements of the Municipality of Tulsa, aided and abetted by certain other members of the fraternity in that vicinity, is after some kind of a record in Jovian achievement is becoming apparent.

On the evening of April 18, the aforesaid Wilcox, and certain members alluded to, assembled in the Chamber of Commerce in Tulsa, for the third time within the present year, and proceeded forthwith to initiate Rejuvenate, and otherwise bring to the state of Jovianism five (5) candidates, caught wandering aimlessly through the electrical preserves of Jove's domain.

After the said candidates were duly dipped into the spouting flames that issue from Mount Olympus, and the secret insignia of the fraternity branded deeply into the escutcheon of each, the assembly repaired in a body to the Wonderland Theater, there to enjoy recreation.

Among the notable guests indentified with the party was Statesman-at-Large, Galen Crow, Po. 925V, who from all reports was deeply involved in acts that were perpetrated.

The Degree Team: Jupiter Galen Crow, Po. 925V; Neptune C. D. Russell, Po. 18855; Pluto, K. T. Stackhouse, Po. 19588; Vulcan, H. Hunt, Po. 19584; Mercury, P. G. Walker, Po. 6871; Hercules, E. A. Wilcox, Po. 6830V; Mars, A. B. Dugger, Po. 19581; Apollo, S. S. Curtis, Po. 19673; Avrenim H. D. Jenkins, Po. 19585; Imps, J. B. Lear, Po. 15849, J. E. Bell, Po. 19579 and H. N. Bates, Po. 1919.

Apparently growing confident with the success of the three Rejuvenations held this year, the above tribe have openly and boldly declared their intention of holding another Rejuvenation some time within the next thirty days. Now what do you think of that?

CASH DIVIDENDS FOR YOU!

PAGES EIGHTEEN AND NINETEEN WILL TELL YOU ALL ABOUT IT.

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PRACTICAL LESSONS IN ELECTRICITY

LESSON TWENTY-SIX

THE ADDITION AND SUBTRACTION OF ALTERNATING E. M. F. AND CURRENT VALUES

By TERREL CROFT

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THE ADDITION and Subtraction of Alternating e.m.f. and Current Values can, where the values are represented by vectors, be readily effected by utilizing the principles of the composition resolution which were briefly described. Where the e.m.f. or current values are represented by sine curves the addition or subtraction of these values can be made by utilizing the principles suggested for the addition and subtraction of sine curves previously outlined. Where the e.m.f.s—or currents—are to be added to or subtracted from other e.m.f.s—or currents—with which they are in phase the operation is, as will be shown, very simple in that it involves merely arithmetical addition or subtraction. But if the e.m.f.s—or currents—to be added are not in phase, then the process is somewhat more complicated. Where the values are not in phase, the addition or subtraction can most readily be made graphically by plotting suitable phase or vector diagrams. Also, it is frequently desirable, for the purposes of explanation, to plot sine curves in conjunction with the vector or phase diagrams, which curves may represent the same values as those presented by the vectors.

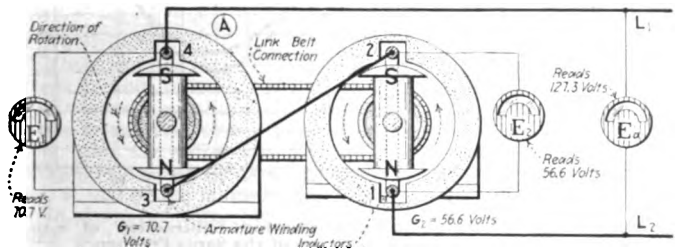

Fig. 1—Two Single-Phase, Alternating-Current Generators of the Same Frequency which are in Phase Connected in Series so that their e.m.f.s Augment or add up

Four Different Cases in the Addition and Subtraction of e.m.f. Values Will be Considered in some detail. While these cases which will be recited refer specifically to e.m.f. values precisely the same principles and process would be employed in adding or subtracting alternating-current values. The sources of e.m.f. in each of these four examples will, Figs. 1, 4, 7 and 10, be represented by generators which are supposed to be rotating uniformly in a counterclockwise direction and developing the effective e.m.f.s indicated. All of the generators are of the same frequency. While generators are shown as sources in these examples, any other sources of alternating current e.m.f.s could be used instead. Where the generators are in phase, Figs. 1 and 7, they are maintained in phase by the link belt connection. Where the generators are not in phase, Figs. 4 and 10, the phase difference between them is maintained by the link-belt-drive connection.

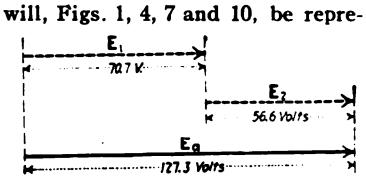

Fig. 2—Diagram Showing the Vector Addition of Two Alternating e.m.f.s of 80 and 100 Volts of the Same Frequency and in Phase

The Method of Adding Two e.m.f.s Which Are in Phase can be best demonstrated by the consideration of a specific example. In this and in the examples which follow it is assumed that the conditions outlined in the preceding paragraph are satisfied:

EXAMPLE.—What (Fig. 1) is the sum of an e.m.f. of 70.7 volts and one of 56.6 volts which are in phase? In other words what e.m.f. will the two generators of Fig. 1, which are in phase and connected in series so that their e.m.f. augment, impress upon the line at L^1 and L^2? SOLUTION.—Since these two e.m.f.s are in phase they may be added directly to obtain their sum or resultant. That is: 70.7 *volts* + 56.6 *volts* = 127.3 *volts*, which

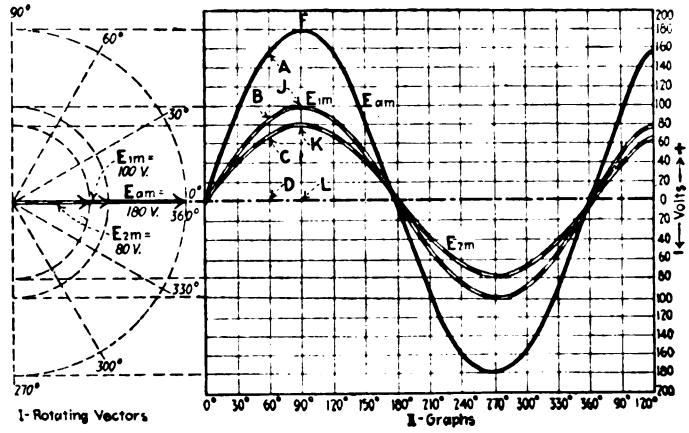

Fig. 3—Rotating Vectors and Graphs Showing Addition of e.m.f.s of 80 and 100 Volts of the Same Frequency and in Phase

is the e.m.f. impressed across L^1 and L^2 as shown in Fig. 1. A graphic statement of this addition, wherein vectors are used to represent the e.m.f. values is shown in Fig. 2. From this it is evident that the length of the vector E^1, which is equivalent to 70.7 volts + the length of the vector E^2, which is equivalent to 56.6 volts = the length of the vector Ea or 127.3 volts. Hence, Ea, is the vector representing the magnitude, 127.3 volts, of the e.m.f. impressed across L^1 and L^2 in Fig. 1.

Now refer to Fig. 3. At *I* the vector diagrams are repeated but in this illustration the lengths of the vectors are, as always must be the case with rotating vectors, proportional to the maximum values of the e.m.f.s. (Maximum values may be obtained by multiplying the corresponding effective values by 1.41. Since all three of these e.m.f.s, E^1m, E^2m and E^3m are in phase they lie directly over one another in the vector diagram. The graphs of *II* were plotted following the method before described.

It is evident that the sine curve Eam is equal to the sum of the sine curves E^1m and E^2m. For example the distances $AD = DB + CD$ and $FL = JL + KL$.

The Method of Adding Two e.m.f.s Which Are Not in Phase will be explained by considering Figs. 4, 5 and 6 and by means of a specific example.

EXAMPLE.—What is the sum of an e.m.f. of 70.7 volts and one of 56.6 volts which differ in phase by 60 degrees? In other words what e.m.f. will the generators G^3 and G^4 of Fig. 4, which are connected in series so that their e.m.f.s augment, impress across

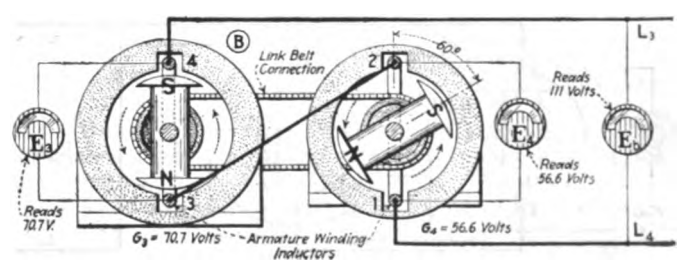

Fig. 4—Two Single-Phase, Alternating-Current Generators which are not "In Phase" Connected in Series so that their e.m.f.s Augment or "add up"

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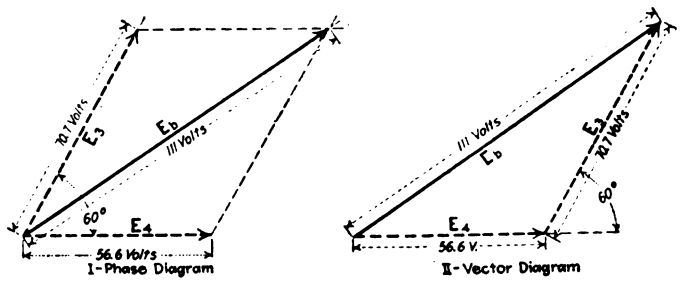

Fig. 5—Diagrams Showing the Vector Addition of Two Alternating e.m.f.s of 80 and 100 Volts of the Same Frequency but Differing in Phase by 60 Degrees

the line L^3 and L^4? SOLUTION.—The phase diagram of Fig. 5*I* shows a graphic solution of this problem, the vector sum of E^3 and E^4 being Eb which is equivalent to scale to 111 volts (effective). At *II* in Fig. 5 is shown the equivalent vector diagram which, of course, gives the same result as does the phase diagram. In Fig. 6, at *III* is shown the rotating phase diagram, the vectors being proportional in length to the maximum values and the corresponding quantities indicated on the phase diagram of Fig. 5-*I*. By using the method hereinbefore described the graph or sine curve representation of *IV*, corresponding to the vector representation of *III* (Fig. 6) can be plotted. By inspection it will be evident that the sine curve Ebm is equal to the sum of the sine curves E^3m and E^4m. For example, $MP = NP + OP$ and $QR = QS - QT$.

The Method of Subtracting an e.m.f. from Another e.m.f. With Which It is in Phase is illustrated in Figs. 7, 8 and 9, and is demonstrated in the following example:

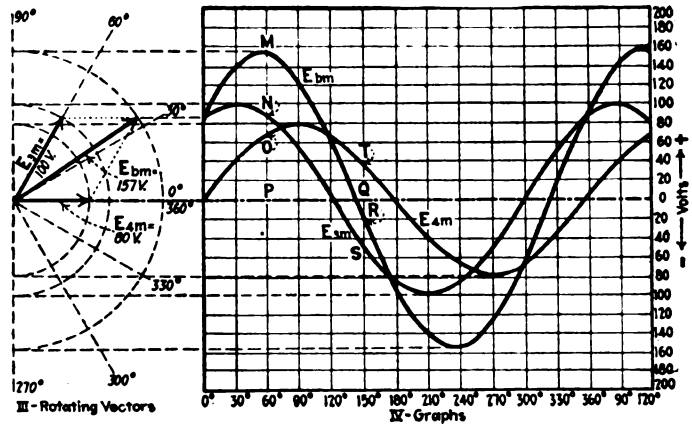

Fig. 6—Rotating Vectors and Graphs Showing Addition of e.m.f.s of 80 and 100 Volts of the Same Frequency but Differing in Phase by 60 Degrees

EXAMPLE.—The two generators of Fig. 7, which are developing, respectively, pressures of 70.7 and 56.6 volts, are connected in series, but, as shown, the connections are such that the e.m.f.s oppose or "buck" one another. What is the resultant e.m.f.? That is, what pressure is impressed across L^5 and L^6 on the line? SOLUTION.—The vector solution of the problem is shown in Fig. 8, from which it is obvious that if the vector E^6, which is proportional in length to 56.6 volts, is subtracted from the vector E^5, which is proportional to 70.7 volts, the difference is represented by the vector Ec, proportional in length to 14.1. (These vectors may thus be subtracted from one another because the e.m.f.s which they represent are all in phase). Therefore, the e.m.f. across L^5 and L^6 is, as suggested in Fig. 7, 14.1 volts. In Fig.

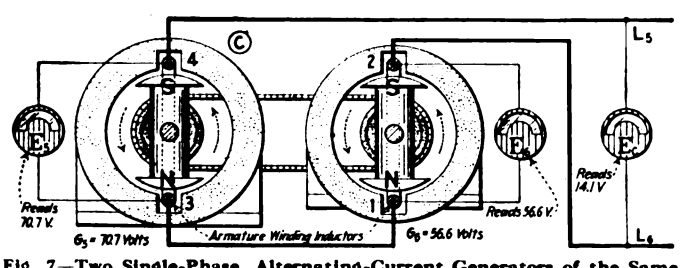

Fig. 7—Two Single-Phase, Alternating-Current Generators of the Same Frequency, which are in Phase, Connected in Series so that their e.m.f.s Oppose or Buck

9-*V* the rotating vectors (which are, of course, proportional in length to the maximum value of the e.m.f.s involved) are shown. From this rotating vector diagram the sine curves shown in Fig. 9-*VI* were plotted. A consideration of these curves will indicate that the curve *Ec*, which has a maximum value of 20 volts, is equal to the difference between the curves E^5, maximum value 100 volts and E^6, maximum value 80 volts.

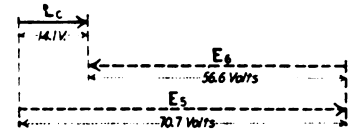

Fig. 8—Diagram Showing the Vector Subtraction of Two Alternating e.m.f.s of 80 and 100 Volts of the Same Frequency and in Phase

The Method of Obtaining the Difference of Two e.m.f.s Which Are Not in Phase is outlined in Figs. 10, 11 and 12. The conditions specified in the paragraph starting "Four Different Cases in the Addition and Subtraction of e.m.f. Values" also applies for this problem which is solved below.

EXAMPLE.—What will be the e.m.f. impressed across the line L^7 and L^8 by the two generators of Fig. 10? The generators are

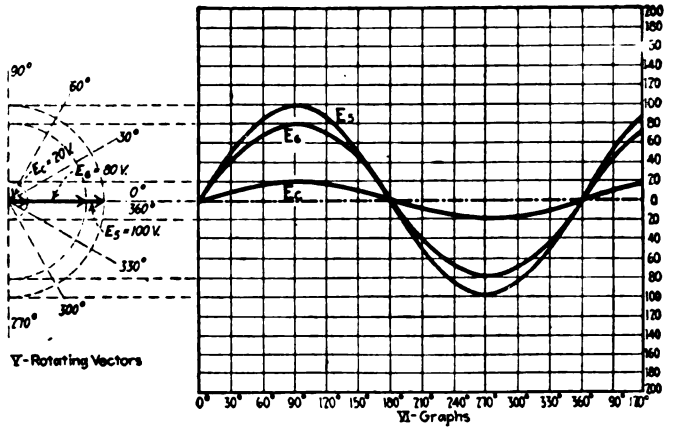

Fig. 9—Rotating Vectors and Graphs Showing Subtraction of e.m.f. of 80 and 100 Volts, Both e.m.f.s are of the Same Frequency and are in Phase

in series but they are so connected, as shown, that the e.m.f.s which they are developing oppose one another and furthermore, differ in phase by 60 degrees. In other words what is the resultant e.m.f. produced by generators G^7 and G^8 combined, under the conditions outlined? SOLUTION.—First consider the vector solution of the problem. When two e.m.f.s are in series so that they "boost" one another (Figs. 4 and 11-*I*), they can be added vectorially as shown in the diagram at Fig. 11-*III*. But if one of the e.m.f.s is reversed, for example E^8 in *II*, then the e.m.f. values must be subtracted from one another, instead of added, to obtain their resultant. How this subtraction is effected

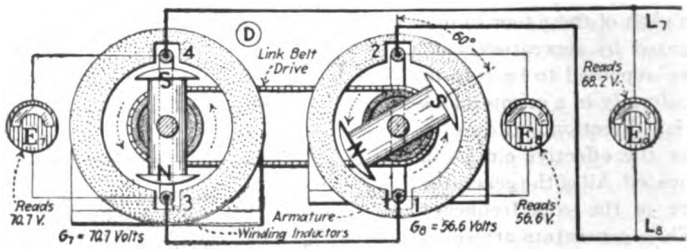

Fig. 10—Two Single-Phase, Alternating-Current Generators of the Same Frequency, which are not in Phase Connected in Series so that their e.m.f.s Oppose Each Other

vectorially is diagrammed in *IV*. Since the e.m.f. *Ea* is reversed in direction in *II* (Fig. 11) the vector representing it in the phase diagram must also be reversed in direction, as shown at *OX*. In other words, to perform the vector subtraction it must be plotted in the position *OY*. Then the vector *OW* is proportional in length to the difference between the e.m.f.s E^7 and E^8 reversed, which differ in phase by 60 degrees. That is, the actual difference in phase between E^7 and E^8 is 120 degrees, as shown in *IV**. *V*, (Fig. 11) is merely an enlarged phase diagram of *IV* and *VI* shows the corresponding vector diagram. Hence, it is apparent from these diagrams, if the length of *Ed* is measured, that the effective e.m.f., *Ed* across L^7 and L^8, is 68.2 volts.

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In Fig. 12 is shown the rotating vectors—maximum values—corresponding to the effective-value vectors of Fig. 11-*V*. In the graph of *VIII* is shown the sine curves which may be plotted from these rotating vectors. Curve *Rs* represents the variation of the e.m.f. *OX* (Fig. 11-*IV*). It will be noted that *curve Ed* = *curve* E^7 + *curve* E^8 and it is also evident that *curve Ed* = *curve*

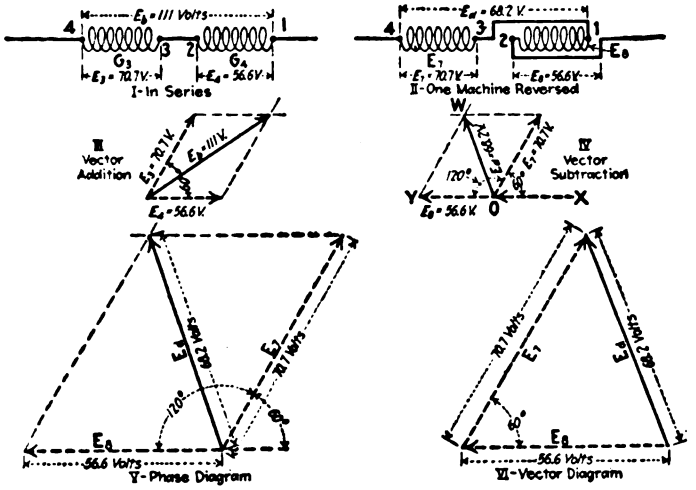

Fig. 11—Illustrating Vector Addition and Subtraction

E^8 + *curve Rs*. This demonstrates the truth of the fact that the vector *Rs*, leading E^8 by 60 deg., is equivalent to the vector E^7 which lags behind E^8 by 120 degrees, as diagrammed in Fig. 11-*IV* and in Fig. 12-*VII*.

*If the e.m.f.s in two coils differ in phase by a certain number of degrees and one of these coils is reversed then, after the reversal the difference in phase between the two e.m.f.s will be 180 degrees minus the former phase difference in degrees. That is, in Fig. 11-*I* the difference in phase between the e.m.f.s of the two coils is, because of the conditions of the problem, 60 degrees. Then, if one of the coils is reversed, as shown at *II*, the difference in phase between the e.m.f.s of the two coils is: 180 deg. — 60 deg. = 120 deg.

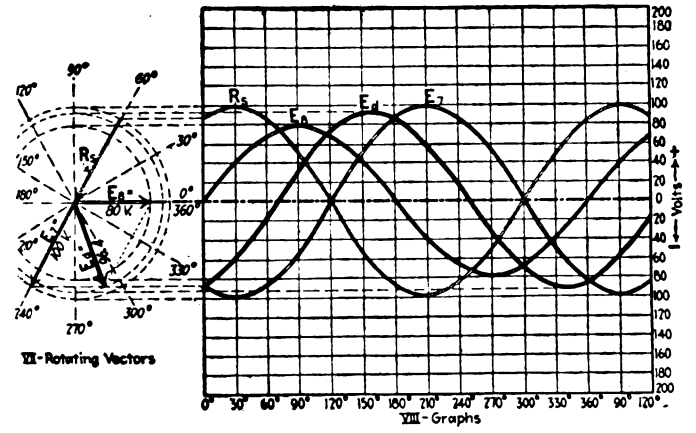

Fig. 12—Rotating Vectors and Graphs Showing Subtraction of e.m.f.s from 80 and 100 Volts which Differ in Phase by 60 Degrees—Both e.m.f.s Are of the Same Frequency

JOVIANS!
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IT IS NOW UP TO YOU!

READ PAGES EIGHTEEN AND NINETEEN.

PACIFIC COAST SECTION, NATIONAL ELECTRIC LIGHT ASSOCIATION CONVENTION

THE FIRST annual convention of the Pacific Coast section of the National Electric Light Association was held April 19 to 21, at Glennwood Inn, Riverside, Cal., and brought together a large number of people engaged in the electrical industry in the western portion of the country, and a number of members and visitors from other sections of the United States.

Having been organized but a little over one year, the success of the section has been phenomenal, not only in achievement but also in the amount of interest it has aroused in matters pertaining to the electrical industry.

In his address before the convention, retiring President R. H. Ballard, Po. 14214, described the Work that has been done by the organization under his administration. He gave a brief outline of the object of the association and what it hoped to accomplish.

The officers elected for the ensuing year are as follows: President, H. F. Jackson, Po. 7731, San Francisco; vice-presidents: Samuel Kahn, Po. 373, Stockton, E. R. Davis, Po. 17067, Los Angeles; secretary, A. H. Halloran, Po. 1291, San Francisco; treasurer, A. N. Kemp, Po. 17073, Los Angeles.

The executive committee: B. H. Ballard, Po. 14214, Los Angeles; Henry Bostwick; W. W. Briggs, Po. 1288, San Francisco; Wm. Baurhyte, Po. 17061, Los Angeles; George A. Campbell, Reno, Nev.; D. E. Harris, Po. 1757, H. C. Reid, Po. 9403, San Francisco; W. P. Southard, Po. 16108, Albuquerque, N. M.; K. E. Van Kuran, Po. 7062, Los Angeles; F. S. Viele, Prescott, Ariz.; A. Emory Wishon, Fresno, and A. B. West, Riverside.

* * * *

MILWAUKEE HOLDS SMOKER

AS THE FIRST OF A SERIES OF "PEP" EVENTS

AT THE meeting of the Milwaukee Jovian League, Charter No. 14, April 11, it was decided by the members to increase the activity of the League by holding a number of Rejuvenations, smokers and other social events.

The first, a smoker at the Forst Keller, on the evening of May 9, proved an enjoyable one. Its purpose was to get the members together to start the proposed activities, and also to celebrate the winning by the League of the loving cup in the recent "One Hundred Point Committee" contest held by the Order.

The smoker brought out a large crowd, including a number of guests who are prospective candidates for membership in the Order.

R. M. VanVleet, Po. 1094, Eighth and Ninth Mercury, was the principal speaker. His address was a review of the organization and work of the "One Hundred Point Committee."

Carl M. Golin, Po. 12395V, Frank K. Ziekursh, Po. 16625, and Chas. J. Klein, Po. 1589, also made interesting addresses.

Social functions will now be held frequently by the League, following a Rejuvenation which is planned for the near future.

Coming Conventions

Electric Power Club

Spring meeting, Homestead Hotel, Hot Springs, Va., June 11-14. Secretary, C. H. Roth, 1410 West Adams Street, Chicago, Ill.

Electrical Contractors' Association of Pennsylvania

Annual convention, Philadelphia, Pa., June 19-21. Secretary, M. J. Sellers, 1518 Sansom Street, Philadelphia, Pa.

American Institute of Chemical Engineers

Semi-annual meeting, Buffalo, N. Y., June 20-22. Secretary, J. C. Olsen, Cooper Union, New York City.

American Institute of Electrical Engineers

Annual meeting, Hot Springs, Va., June 26-29. Secretary, F. L. Hutchinson, 33 West Thirty-Ninth Street, New York City.

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

Bad Plumbing

By W. R. J.

'Twas in the evening hours, when the copper
on the beat
Was startled by a figure darting wildly down
the street.
His hat was dented in the crown, his hair
was all awry,
His collar wet and streaked limply clung
about his tie.
Said one who grasped him by the arm, "Who
mussed you up that way?"
He loosened up his collar some before a word
he'd say.
"I tried to stop a plumbing leak and this is what
I did:
"I made the wrong deduction and I tapped the gas
instead.
"And consequently when I tried to fix it back
again
"I got the gas connected with the blasted water
main.
"My bath tub is a sheet of flame and every single
jet
"Is spouting like a fountain and the house is
wringing wet."

* * * *

When Teddy Goes To War

NEWS ITEM: Colonel Roosevelt will probably go to Europe as an officer.

By W. R. J.

Now when our Teddy goes across the ocean's
briny waves,
We have a hunch that German bunch will tumble
in their graves.
For Teddy is a man of might, of prowess and
renown,
And Kaiser Bill will get a thrill when Teddy
hunts him down.
He's stalked the elephant in droves, and wolves
and lions, too;
He's fought a bear right in his lair, to show
what he could do.
When nature-fakers were abroad, he slapped them
on the wrist;
A cheeta wild he found so mild he gave its
tail a twist.
He made the octopus behave, and tore him from
his prey;
He coins a word no one has heard most every
other day.
The mollycoddle shakes with fear, and liars,
crooks and thieves,
All quickly flee whene'er they see him rolling
up his sleeves.
We warn the pesky submarine to creep beneath
the moss,
And hide away upon the day that Teddy goes
across.
And though ambition's call is great, we warn
you, Kaiser Bill,
To stop the fight and say good-night, or you
will get your fill.
No matter how you want to fight, or how you
fought before,
The fur will fly into the sky, when Teddy hits
your shore.

Do Your Little Bit

By W. R. J.

De summah time am heah agin, an' dere
am lots to do;
De sojers in de trenches am a hollerin'
to you.
Dey's got to have dey rathuns, kase dey
got to eat to fight,
So Ise a gwine to do mah bit an' wuk
wid all mah might.

Dey tell me food am mighty skase an'
mighty hard to git,
An' dat dere's lots ob helpless folks
dat's badly needin' it
In Yourip where de fightin' is—it sho'
am mighty bad,
Fo' when ah think ob hungry babes it makes
me berry sad.

Suppose dem chillun was mah own, dat's
cryin' fo' some bread,
An' Ah was crippled up mahself, or maybe
even dead?
Ah don't care what's de cause of it, a
man would be a whelp,
Who didn't try to feed dem when dey
call to him fo' help.

Ah may be gettin' kinder old, an' slowin'
up to boot;
Ah reckon Ise too lame to march an' mos'
too blind to shoot;
But when de harves' comes dere's some
upon de other side,
Will find dat Uncle Remus has some rathuns
to divide.

* * * *

Her First Vote

By W. R. J.

She stood in meditation deep, a ballot in here hand, as though perturbed by questions dire, she could not understand. The pencil at her ruby lips she held as one in doubt; unable to determine who to leave and who cross out.

Before her were the names of those who sought to serve the state, from governor to constable, and this was her debate:

"Let's see, I think the sheriff should become a suit of blue—It says here 'Road commissioner.' I wonder what they do?

"Why here is Hill for governor—Oh, my, he's awful fat! But then I wouldn't vote for him, his wife is such a cat!

"Of all things, here is Mr. Smith! Why should such people run? He's crabbed as a polar bear, and uglier than one.

"Well, here's another—Vanderfoot! Say this thing is a scream, Why didn't Harry Beauknot run? He's handsome as a dream.

"I think I'd vote for Wallington, although he's undersize, if I was sure he is the one who has the deep blue eyes.

"Why do they pick such awful men? Who picked them anyway? They certainly have little taste or judgment I would say. I think it is some crooked work—it's certainly a shame. I'll bet I'd tell them what I think if I could fix the blame."

And thus she pondered, growing sure the candidates were bad, till finally she asked the clerk if that was all he had. And when he answered, "That is all," she told him flatly then, that she would go some place and vote where they had better men.

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JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, W. N. Lockhert, Po. 14383, care N. O. T. & L. Co.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, C. O. Nichols, Po. 15537, care Benton Harbor & St. Joseph Railway & Light Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, Edmond D. McCarthy, Po. 589-10, 41 East Eagle Street.

CHATTANOOGA—Wednesday, 12 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge, 1900 Continental & Commercial Bank Building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, O. B. Marsh, Po. 17718, care Federal Sign System (Electric), 37 East Third street.

CLEVELAND—Regular meeting, Thursday, 12 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Ry. Power & Light Co.

DALLAS—Friday, 12:15 p. m. Secretary, E. E. Roessler, Po. 12128, P. O. Box 1506.

DAYTON—First and third Mondays of each month, 12 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Co.

DENVER—Wednesday, 12:15 p. m., Kaiserdorf Hotel. Secretary, R. Arnold Lewis, Po. 11514, care Edins Lamp Works.

EAU CLAIRE.—First Monday each month. Secretary, Gurth Williams, Po. 18268.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Co.

GALVESTON—Meet on call. Secretary, Howard Jolly, Po. 16826, care Postal Tel. Co.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Co.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Co.

HUNTINGTON—Last Friday each month, Huntington Hotel. Secretary, H. A. Haddox, Po. 9164, 1116 Fourth avenue.

INDIANAPOLIS—Monday, 12:15 p. m. Secretary, A. H. Smith, Po. 13580, care Ford Motor Car Co., 1315 East Washington Street.

KANSAS CITY—Every other Friday, 12:15 p. m., Sexton Hotel, Secretary, T. R. Harber, Po. 18908, 1500 Grand Avenue.

LA CROSSE—First Thursday each month, Elks Club, 6 p. m. Secretary, Dan. J. Whalen, Po. 16022, care Thill-Manning-Whalen Co.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Co.

LOS ANGELES—Wednesday, 12 m., Jahnke's Tavern, 534 S. Spring St. Secretary, Clifton Peters, Po. 12734, 108 Edison building.

LOUISVILLE—Tuesday, 12:15 p. m., Hotel Henry Watterson. Secretary, C. C. Dicken, Po. 16660, care Louisville Gas & Electric Company.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel.

MILWAUKEE—Tuesday, 12 m., Maryland hotel.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

MUSKOGEE—Secretary, J. H. Schmidt, care Muskogee Gas & Electric Co.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Co.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne St., New Orleans, La.

NEW YORK—First Wednesday each month, 12:15 p. m., Browne's Chop House, 1424 Broadway. Secretary, H. E. Cleland, Po. 18656, care Electrical World, 239 West Thirty-Ninth Street.

OKLAHOMA CITY—Monday, 12:15 p. m., Lee Huckins Hotel. Secretary, O. T. Jenkins, Po. 14273, care Nunn Electric Co.

PEORIA—First and third Saturdays of each month, 1 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Co.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon St.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, J. H. Van Aernam, Po. 14051, care General Electric Co.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's restaurant, Kellog street. Secretary, J. O. Roser, Po. 10412, care General Electric Co.

RICHMOND — Third Wednesday of each month, Business Men's Club. Secretary, L. E. Walker, Po. 6610, care Western Electric Co.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Co.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Co.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Ridpath, Po. 7739, 505 Rialto building.

SPOKANE—First and third Wednesdays of each month, 12 m., Davenport's hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Co.

STARK COUNTY—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

ST. LOUIS—Tuesday, 12:15 p. m., Mercantile Club. Secretary, Geo. McD. Johns, Po. 9052, Room 401, City Hall.

ST. JOSEPH, MO.—Secretary, W. R. Thomas, Po. 1489, care American Elect. Co.

ST. PAUL—First and third Thursdays of each month, 12:10 p. m., Emporium Tea Rooms. Secretary, A. L. Frankenburger, Po. 5289, care Western Electric Co., 235 East Sixth street.

TULSA, OKLA.—Monday, 12 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G. Walker, Po. 6871, 18 West Third Street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Co.

WICHITA—First and third Mondays of each month, 12 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Co.

WINNIPEG—Every other Wednesday, 12:15 p. m., St. Regis Hotel. Secretary, C. T. Kummen, Po. 15957, 386 Donald Street.

Sticker—two inches in diameter, printed in red on white—being distributed free of charge by The Jovian Order on request. Write, stating the quantity you will use, to

THE JOVIAN ORDER

Syndicate Trust Building, St. Louis and put them on your letter heads and envelopes.

NATIONAL ELECTRIC LIGHT ASSOCIATION CONVENTION

DELEGATES and visitors to the National Electric Light Association Convention convened at the United Engineering Societies' Building, New York City, May 9. The convention was called to order by President Herbert A. Wagner, Po. 10371, at 10:30 a. m.

One of the opening ceremonies was the unfurling of a large American flag to the music of a trumpet; the national anthem, "America" was sung by the assembly.

President Wagner then delivered his annual address.

Among the members who addressed the convention were: W. W. Freeman, Po. 1899V, chairman of the public policy committee; John W. Lieb, Po. 11977, of the sub-committee; J. H. Finney, Po. 10571, Major of the Engineers' Reserve Corps; J. E. Aldred, of Montreal and Baltimore, J. B. McCall, Po. 17933, of Philadelphia, and Jupiter Henry L. Doherty, Po. 3208-33.

The officers elected for the ensuing year are: President, John W. Lieb, Po. 11977, New York; vice-presidents: W. F. Wells, Po. 1915, Brooklyn; R. H. Ballard, Po. 14214, Los Angeles; Samuel Scovill, Po. 2400-30, Cleveland; R. W. McDougall, Toronto; treasurer, W. H. Atkins, Boston.

New members of the executive committee are: Paul Spencer, Walter Neumiller, Po. 5402, and E. W. Lloyd, Po. 12265.

* * * *

Coming Rejuvenations

June 2—Dallas, Texas. First Tribune, R. S. Wakefield, Po. 2606, 1312 Busch Building.

June 12—Hopewell, Va. First Tribune, W. T. Evans, Po. 14939.

June 15—Los Angeles, Cal. First Tribune, H. N. Sessions, Po. 14256, care Southern California Edison Company.

June—Toledo, Ohio. First Tribune, M. W. Hansen, Po. 6121, 34 Eleventh Street.

July—Muskogee, Okla. First Tribune, L. A. White, Po. 14275, care Muskogee Gas & Electric Company.

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EMPLOYERS
CAN YOU USE ANY OF THESE MEN?

Do You Need
AN EXECUTIVE, SALESMAN, SUPERINTENDENT, ENGINEER OR OTHER EMPLOYE?

WE PUBLISH below a list of more than 300 applications now on file with our Employment Bureau, giving the number under each classification and a limited statement of the specifications. Among these you will surely find the man to fill the place you have open. Let us know your requirements, and we will take pleasure in putting the applicants in touch with you promptly. Address The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

CLASSIFICATION	No. on File	Age	Qualifications	Experience	Salary Wanted	Location
Advertising Managers	1	25	High School	.....	$125	St. Louis.
Bookkeepers	5	26–31	High School	5–14 yrs.	$65–100	Anywhere.
Central Station Engineers	9	22–46	H. S.-Univ.	6–18 yrs.	$60–150	Anywhere.
Clerical	5	22–40	High School	2–10 yrs.	$65–125	Anywhere.
Commercial Laboratory Workers	2	29–32	Tech. School	11 yrs.	$150	Anywhere.
Construction Engineers	9	21–49	H. S.-Univ.	4–20 yrs.	$50–200	Anywhere.
Consulting Engineers	2	27	Tech. Grad	6 yrs.	.....	Anywhere.
Contracting Engineers	2	25–26	H. S.-Tech.	Practical	$100	Anywhere.
Draftsmen	3	25–31	Tech. School	5–18 yrs.	$80–150	Anywhere.
Electricians	5	20–35	H. S.-Univ.	3–12 yrs.	$60–100	Anywhere.
Electrical Engineers	19	22–45	Practical-Univ.	5–20 yrs.	$65–300	Anywhere.
Engineers	4	23–31	Practical-Univ.	5–12 yrs.	$120–160	Anywhere.
Estimator	1	42	Practical	.....	.....	Anywhere.
Fixture Man	1	28	Practical	10 yrs.	.....	Anywhere.
Foremen	4	27–31	Practical	7–14 yrs.	$125–160	Anywhere.
General Managers	4	30–34	Practical	7–15 yrs.	$250–417	Anywhere.
Illuminating Engineers	2	24–29	Univ	5–7 yrs.	$150	Anywhere.
Linemen	3	24–28	High School	4–9 yrs.	$90	Anywhere.
Maintenance Men	1	26	High School	6 yrs.	.....	Anywhere.
Managers, Commercial Department	1	35	Practical	12 yrs.	$200	Anywhere.
Managers, Contracting	2	26–29	College	5–7 yrs.	$125–166	Anywhere.
Managers, Engineering Department	1	.....	Univ	6 yrs.	.....	Anywhere.
Managers, Jobbing House	1	32	College	13 yrs.	$10,000	Anywhere.
Managers, Office	1	32	High School	10 yrs.	$200	Anywhere.
Managers, Plant	21	25–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere.
Managers, Store	1	29	Univ.	10 yrs.	$125	West.
Managers, Railway	1	39	Practical	4 yrs.	$300	Anywhere.
Managers, Traffic	1	37	Practical	15 yrs.	$250	Anywhere.
Manufacturers Representatives	17	30–46	Practical-Tech.	9–20 yrs.	Com.–$300	Anywhere.
Mechanical Engineers	1	40	Univ.	.....	$200	St. Louis.
Meter Testers	3	25–34	Grade-College	8–16 yrs.	$100	Anywhere.
New Business Managers	6	29–34	H. S.-Univ.	9–15 yrs.	$100–200	Anywhere.
Office Executives	14	25–47	Grade-Univ.	4–18 yrs.	$80–200	Anywhere.
Purchasing Agent	13	24–41	Grade-Tech.	4–21 yrs.	$80–200	Anywhere.
Sales Engineers	7	24–31	College-Univ.	4–11 yrs.	$100–200	Anywhere.
Sales Managers	15	28–45	H. S.-Univ.	4–17 yrs.	$150–417	Anywhere.
Salesmen	103	22–55	H. S.-Univ.	2–25 yrs.	$75–200	Anywhere.
Store Keepers	2	24–33	Practical	3–5 yrs.	$75–150	Anywhere.
Superintendents	41	26–46	H. S.-Univ.	3–15 yrs.	$100–500	Anywhere.
Supervisors Lighting	1	25	Technical	7 yrs.	$100	East.
Telephone Engineers	2	24–28	H. S.-Tech.	5–7 yrs.	.....	Anywhere.
Testing Engineers	1	24	Technical	2 yrs.	$100	Anywhere
Wiremen	2	25–30	High School	9–17 yrs.	$100–125	Anywhere.

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JOVIANS!

Can You Use Any of These Jobs?

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, are seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau. A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of any of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

1. **Advertising Man.** Eastern manufacturer needs young advertising man who can also write up bulletins, prepare price lists, etc.
2. **Billing and Entry Clerk.** Large Boston manufacturer wants man with experience in electrical supply business.
3. **Bookkeeper.** Position open for man acquainted with electric line, in Michigan retail house.
4. **Central Station Engineers.** An opening with large city public service concern, for several engineers; $80.00 to $95.00 a month to start.
5. **Central Station Engineers.** Summer resort has temporary employment for one or two plant engineers; salary $110.00 per month.
6. **Chemist.** A Chicago lighting supplies factory has an attractive opening for a chemist familiar with the manufacture of flashlight batteries.
7. **Draftsmen.** Positions paying $80.00 to $100.00 per month open with large central station company.
8. **Electrical Contractor.** New England manufacturing concern is looking for a man who has had practical experience in and made a paying success of an electrical contracting business.
9. **Electrical Engineers.** Manufacturing concern wants men acquainted with motor, fan and blower design, who wish to work up as the business grows.
10. **Electrical Engineers.** A large, metropolitan central station company wants to get in touch with a number of these; salary $65.00 to $90.00 per month.
11. **Electrical Supply Salesman.** Old, established house in New Orleans wants active young man to cover southern territory.
12. **Electrical Supply Salesmen.** One of the largest houses in the country wants a number of men on the road.
13. **Electricians.** A number of men wanted by eastern manufacturer of recording instruments.
14. **Electricians and Wiremen.** Thirty to fifty cents an hour offered by auto repair department of Michigan electric garage.
15. **Estimator.** Eastern manufacturer has opening for man acquainted with the electrical end of the business.
16. **Foreman.** Michigan electric house wants man to handle the practical end of its contracting department.
17. **Ledger Clerks.** An Illinois public service company can use several men in this capacity.
18. **Office Executive.** Attractive opening for the right man with large Michigan electric house.
19. **Office Executive.** A mid-west electric supply house will pay $125.00 per month for a satisfactory man, with real ability to make good.
20. **Sales Engineer.** An opening, for the right man, with a manufacturer of an electric time recorder.
21. **Salesmen.** New York maker of electric signs wants able salesman to push his goods.
22. **Salesmen, Commission.** Good opening, in live Michigan city, to sell electric appliances.
23. **Storekeeper.** Practical man, with experience in retail electric supply house, needed by a Michigan correspondent.
24. **Store Salesman.** Electric supply house in Michigan has opening for man in retail department.
25. **Superintendent.** An ambitious man, with practical experience, will have consideration by a Michigan electrical contractor.
26. **Testing Engineers.** Electrical instrument manufacturer wants to get in touch with several men.
27. **Traveling Salesmen.** Electrical supply house, located in Montana, wants one city salesman and two to cover the state.
28. **Traveling Salesman.** Ohio manufacturing concern wants a man to cover Ohio, Indiana and Eastern Michigan—one who can eventually become office manager; salary $1200.00 to $1500.00 a year.
29. **Traveling Salesmen.** Chicago electrical manufacturing concern is in need of one or two men on the road.
30. **Salesmen.** Graduate Electrical, who speak spanish, splendid opening with large manufacturing concern over seas territory.
31. **Switchboard Estimator.** Practical man needed at once by large St. Louis contracting house.
32. **Bookkeeper.** Capable man wanted by Cleveland electrical supply house.
33. **Fixture Man.** Cleveland contractor wants to get in touch with the right man for their fixture department.
34. **Sign Salesman.** Special New York city positions open for energetic solicitors.
35. **Store Manager.** Indiana house wants experienced young man to take charge of retail and wholesale departments; salary, $100 per month.
36. **Foreman.** Ohio motor manufacturing concern wants practical man to take care of assembling department.
37. **Power Salesman.** Ohio public service concern is in need of an A1 technical man who can handle the sale from proposal to installation; good salary.
38. **Lighting Salesman.** Good domestic and commercial representative wanted by Ohio central station.
39. **Office Executive.** Detail man wanted for electrical supply house, one familiar with prices, inventory, traffic, purchasing and follow-up systems.
40. **Electrical Engineer.** Manufacturing plant near Pittsburg is in the market for university graduate familiar with A. C. and D. C. switchboards; salary, $125 per month.
41. **Salesmen.** Kansas City jobbing house wants two high grade, experienced men to cover Oklahoma and Kansas; $1800 and expenses.
42. **Illuminating Engineer.** Attractive opening with firm of consulting engineers.
43. **Fuel Engineers.** Men wanted, must be familiar with economical central station operation.
44. **Electricians.** Oklahoma telephone system is in need of practical men.
45. **Electrical Engineers.** Opening with telephone concern; switchboard and power plant departments.
46. **Meter Testers.** Men wanted in Oklahoma for inspection and testing of phone installations.
47. **Telephone Engineers.** Switchboard engineering department of a southwestern telephone system can use two or three technical graduates.
48. **Testing Engineers.** Attractive opening, with Oklahoma telephone system, for several young men.
49. **Construction Engineer.** Idaho reclamation project needs young man familiar with construction, operation and cost-keeping; must have tact and initiative. $125 per month to right man.
50. **Cost Clerk.** Good salary to man familiar with electrical jobbing business, cost and pricing; New Jersey house.
51. **Salesman.** Electrical supply house wants man to cover New Jersey. Splendid opportunity.
52. **New Business Agent.** Texas public service corporation will pay $100 per month for competent and active man

JOVIAN HOTELS

HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their current membership cards at the time of settlement. Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage. Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

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Atlantic City, N. J.—Isleworth	$1.50	$2.00
Baltimore, Md.—Emerson	$2.00	$2.50
Boise, Ida.—Idaha	$1.00	$1.50
Boston, Mass.—Brunswick	.....	.....
Charlotte, N. C.—Buford	$1.00	$1.50
Chattanooga, Tenn.—Theresa	.....	.....
Colorado Springs, Colo.—Acacia	.....	.....
Columbia, S. C.—Colonial	.....	.....
Dallas, Tex.—Oriental	$1.50	.....
Des Moines, Ia.—Kirkwood	.....	.....
Denver, Colo.—Albany	$1.00	$1.50
Detroit, Mich.—Hotel Tuller	.....	.....
Dixon, Ill.—Dixon Inn	$1.00	.....
Edmonton, Alta.—Alberta	.....	.....
Eau Claire, Wis.—Eau Claire	.....	.....
Ft. Wayne, Ind.—Wayne	$1.00	.....
Ft. Worth, Tex.—Metropolitan	.....	.....
Gary, Ind.—Gary	$1.00	$1.50
Grand Rapids, Mich.—Livingston	$1.00	.....
Harrisburg, Pa.—Columbus	.....	.....
Houston, Tex.—Bender	$1.50	$2.00
Hutchinson, Kan.—Chalmers	.....	.....
Idaho Falls, Ida.—Eleanore	$1.00	$2.00
Jackson, Miss.—Royal	.....	.....
Jacksonville, Fla.—Mason	.....	.....
Jacksonville, Ill.—Pacific	.....	.....
Kalispell, Mont.—Kalispell	$1.00	.....
Kansas City, Mo.—Coates	$1.00	$1.50
Lethbridge, Alta.—Alexandria	$1.00	.....
Los Angeles, Cal.—Clare / New Rosylyn	$1.00	$1.50
Louisville, Ky.—Galt	.....	.....
Madison, Wis.—Capital	$1.00	.....
Milwaukee, Wis.—Charlotte	$1.00	.....
Mitchell, S. D.—New Navin	.....	.....
Montgomery, Ala.—Exchange	.....	.....
Montreal, P. Q.—St. Lawrence Hall / Windsor	.....	.....
Muskegon, Mich.—Muskegon	$1.00	$1.50
New Orleans, La.—De Soto	$1.00	.....
New York, N. Y.—Breslin	.....	.....
Niagara Falls, N. Y.—Prospect	.....	.....
Norfolk, Va.—Southland	$1.00	$1.50
Oshkosh, Wis.—Tremont	.....	.....
Peoria, Ill.—Mecca	$1.00	.....
Philadelphia, Pa.—New Bingham	$1.50	$2.50
Pittsfield, Mass.—Wendell	$1.50	.....
Portland, Ore.—Multnomah	$1.50	.....
Portland, Ore.—Oregon	$1.00	$2.00
Richmond, Va.—Jefferson	$1.50	$2.50
Richmond, Va.—Richmond	$1.50	$2.50
Roanoke, Va.—Rockledge	$1.00	.....
Rochester, N. Y.—Powers	.....	$2.00
Rutland, Vt.—Berwick	.....	.....
St. Joseph, Mo.—St. Francis	.....	.....
St. Louis, Mo.—American	$1.50	.....
Salt Lake City, Utah—Newhouse	.....	.....
San Angelo, Tex.—Landon	.....	.....
San Diego, Cal.—San Diego	$1.00	.....
San Francisco, Cal.—Argonaut	$1.00	$2.00
San Francisco, Cal.—Sutter	$1.50	.....
Santa Barbara, Cal.—Potter	.....	.....
Schenectady, N. Y.—Mohawk	$1.00	$2.00
Seattle, Wash.—Seattle	$1.00	$2.00
Sheridan, Wyo.—Sheridan	.....	.....
Shreveport, La.—Youree	.....	.....
Sioux City, Ia.—Martin	$1.00	$2.00
Spokane, Wash.—Spokane	.....	.....
Springfield, Mo.—Colonial	.....	.....
Tacoma, Wash.—Olympus	.....	.....
Three Rivers, Mich.—Three Rivers	$2.00	.....
Tucson, Ariz.—Heidel	.....	.....
Vicksburg, Miss.—Carroll	$1.00	.....
Waco, Tex.—New State	$1.00	$2.00
Watertown, S. D.—Kampeska	$1.00	.....
Winnipeg, Man.—St. Regis	$1.50	.....
Winnipeg, Man.—Wellington	$1.00	$1.50
Winona, Minn.—Winona	.....	.....

Answers to Questions

MISS PARNELIA: There may be a shortage of men for a while after the war is over but we believe Providence will take care of the situation. In fact, it seems to be getting busy now. A precinct in Kansas reports the birth of two hundred and twenty-two boys in the last few years and not a single girl baby.

ARCH W. The new government of Russia has not taken any action to enforce the habit of shaving. No doubt if it does there will be a great demand for barbers in that country.

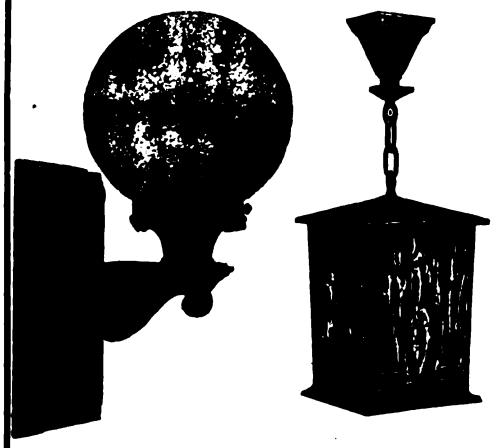
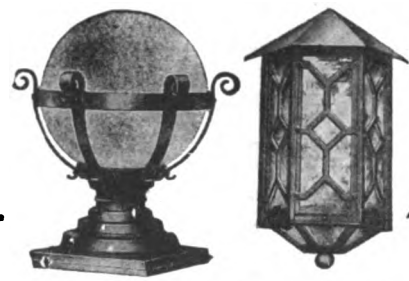
GLADYS. A slacker is a man who tries to dodge enlistment in the army or navy. Perhaps the young man who has been keeping company with you for eight years does not feel that he is able to support a wife.

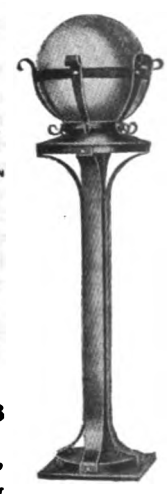
COUNT OVER. There does not seem to be any depreciation in the value of titles in this country. We refer you to Mr. Jess Willard who holds the highest one in the United States.

ELECTRICIANS AND INSIDE WIREMEN WANTED. No union men need apply. Write or call M. & S. Electric Co., Flint, Mich.

MAY THAT RARE HUMAN —A DISSATISFIED JOVIAN— NOW USE WHAT IS OFFERED OR FOREVER HOLD HIS PEACE!

READ PAGES EIGHTEEN AND NINETEEN.



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THE JOVIAN

Volume Eleven | JULY, 1917 | Number Eight

REPORT OF MEETING OF FIFTEENTH CONGRESS AND PAST JUPITERS

IN ACCORDANCE with a call issued by Reigning Jupiter Henry L. Doherty, Po. 3208-33, the following named Jovians met in Chicago, at the Sherman Hotel, on Tuesday and Wednesday, June 12 and 13, 1917:

PAST JUPITERS

Sam. A. Hobson, Po. 3, Oscar C. Turner, Po. 333-3, Homer E. Niesz, Po. 306V, W. N. Matthews, Po. 496-44.

FIFTEENTH CONGRESS

Henry L. Doherty, Po. 3208-33, Ell. C. Bennett, Po. 3932-13V, W. J. Trott, Po. 2685, Martin J. Wolf, Po. 6027V, E. W. Donoho, Po. 6049, James R. Pollock, Po. 18675.

REPRESENTATIVES OF LEAGUES

Thos. J. Creaghead, Po. 3013, Cincinnati; C. W. PenDell, Po. 3253, Chicago; Ainslie A. Gray, Po. 2271, Chicago; Fred. P. Vose, Po. 1877, Chicago.

The meeting was called to order with Jupiter Doherty in the chair and Mercury Bennett as secretary.

The chair announced that the meeting was called for the purpose of discussing the report of the Special Commission, made at Cleveland April 3 and 4, 1917, and for the consideration of other matters relating to the progress of the Order and possible changes in its method of operation, as suggested by numerous Jovians through the medium of the Central Office.

At the request of the chair, the secretary read a paper giving briefly the subjects for discussion as covered by the preceding paragraph.

ANNUAL MEETING

Upon motion of Past Jupiter Hobson, seconded by Past Jupiter Turner, it was unanimously resolved that the Annual Convention of the Jovian Order be held at the time set by the Jovian Constitution, to-wit: within ten days of October 15. However, that all forms of entertainment be omitted and the character of the meeting strictly that of a business gathering called and conducted for the purpose of transacting the necessary business of the Order. The resolution also provided that a patriotic dress should be given to the Convention as a proper manifestation of the patriotism and loyalty of the Jovain Order to its country in this time of need.

Upon motion of Mr. Wolf, seconded by Mr. Turner, and unanimously carried, it was decided that the attendance of the meeting be promoted in every possible way consistent with the money available for that purpose, also that the place and date of meeting be selected by Jupiter Doherty.

JOVIAN INSURANCE

At the request of the chair, Mercury Bennett read a complete report of the progress to date of the plan to furnish Jovians with accident and health insurance at a rate some fifty per cent less than that for which it could be secured in regular channels. Upon motion of Mr. Trott, seconded by Mr. Donoho, the meeting expressed unanimous approval of the plan, and confidence in its furnishing to the individual Jovian the tangible dollars and cents return which he desires.

DOHERTY PLAN

Jupiter Doherty gave a brief sketch of his plan to provide Jovian Leagues with development work, closing with the statement that the first operation would require an investment of quite a large sum, and that he believed the time inopportune to solicit such a sum from the industry.

The meeting unanimously agreed that the operation of the plan be postponed until conditions were more propitious to its best development.

CLEVELAND COMMISSION REPORT

Relations Between the Jovian Order and Local Leagues

A general discussion upon all of the matters contained in the Cleveland Commission report and presented before the Commission was carried on during the greater part of Tuesday, the 12th, until 11 p. m., and Wednesday from 10 a. m. to 2 p. m.

The discussion revolved mainly upon the point of whether or not the distribution of the present dues of $4.00 should be made in a manner to reduce the amount coming to the Central Office and increase the amount going to the local League. Closely connected with this question was the possibility of decreasing the present expense of the Central Office, which was given earnest consideration.

By the unanimous consent of the meeting, Jupiter Doherty was authorized to appoint a committee of five, who would be instructed to meet as often as necessray prior to August 1, to thoroughly analyze all questions, and to make a complete report of its decision to a meeting of Congress and Past Jupiters to be called not later than August 20.

This action was taken for the reason that the meeting did not represent a quorum, and that, therefore, any decisions it might reach would not be official. Further, because many of the questions required exhaustive investigation that would cover too extended a period to make it possible for the meeting to remain convened until the information could be secured.

It was understood that Jupiter Doherty would personally impress upon members of Congress the absolute necessity of attending the next meeting, and that every other possible effort would be used to obtain the necessary quorum, which it was believed could be secured.

Jupiter Doherty set forth a possible solution to the problem of the distribution of Jovian dues of $4.00 in a manner that would be satisfactory to all concerned. The suggestion was concurred in by all those present and was recommended for the considera-

(continued on page nine)

AFFIRMATIVE INQUIRIES ON THE FIRST RELEASE OF THE JOVIAN INSURANCE PLAN LAST MONTH HAVE BROKEN ALL DIRECT RETURN RECORDS. DID WE RECEIVE YOURS? READ PAGES 18-19.

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

All matter for the news columns of The Jovian, and advertising copy, should reach the Central Offices not later than the tenth of each month

Advertising rates on application.

FIFTEENTH JOVIAN CONGRESS

Henry L. Doherty, Po. 3208-33, Fifteenth Jupiter, New York, N. Y.

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District 3—Jas. R. Pollock, Po. 18675, New York, N. Y.
District 4—William Gloeckner, Po. 2370V, Philadelphia, Pa.
District 5—W. J. Trott, Po. 2685, Grand Rapids, Mich.
District 6—C. D. Cabaniss, Po. 4453, Atlanta, Ga.
District 7—J. E. Cowles, Po. 1549V Shreveport, La.
District 8—W. A. Burckhard, Po 1939, Norfolk, Va.
District 9—Martin J. Wolf, Po. 6027V, St. Louis, Mo.
District 10—E. W. Donoho, Po. 6049, Chicago, Ill.
District 11—J. I. Colwell, Po. 11229, Seattle, Wash.
District 12—John F. Greenawalt, Po. 2308, Denver, Colo.
District 13—Thomas E. Collins, Po. 9327, San Francisco, Cal.
District 14—P. T. Davies, Po. 8818, Montreal, Can.
District 15—George L. Guy, Po. 4727, Winnipeg, Man.

Ell C. Bennett, Po. 3932-13V, St. Louis, Mo.
In Charge of Central Offices.

PAST JUPITERS' ASSOCIATION, 1915-16.

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Past Jupiter Eight, Chicago, Ill.

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Past Jupiter Nine, Colorado Springs, Colo.

ROBERT L. JAYNES, Po. 1421-50
Past Jupiter Ten, Massaponax, Va.

FRANK E. WATTS, Po. 1509-47
Past Jupiter Eleven, New York City.

W. N. MATTHEWS, Po. 496-44V
Past Jupiter Twelve, St. Louis, Mo.

HOMER E. NIESZ, Po. 306V
Past Jupiter Thirteen, Chicago, Ill.

THOS. A. WYNNE, Po. 11457V
Past Jupiter Fourteen, Indianapolis, Ind.

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NO DIVIDENDS WITHOUT INVESTMENT — REACH OUT NOW AND TAKE YOUR PROFIT

THE QUESTION of dues to an organization is one that is just as vital as that of capital and income to a business.

Every business man knows that a certain amount of funds are essential to the operation and development of a business. He knows that a limited capital restricts development; that out of the gross receipts must be paid the expenses. If the receipts are inadequate there is bound to be a deficit.

It follows, therefore, that the success of an enterprise depends upon enough capital to transact business on a scale that will produce a gross profit sufficiently large to meet all expenses, pay a reasonable return on its investment and provide a surplus for development.

There are numerous reasons why the last named feature is essential to the success of an enterprise or an organization. The foremost one is contained in the fact that it is practically impossible for either to remain at a fixed state and continue successful. Competition will not permit it.

Take the little store in a growing city where there are other little stores competing for supremacy. The ones that develop and move to larger quarters with increased stocks and facilities will soon overshadow the ones that continue in a small way, and eventually they will crowd them out.

Just so it is with an organization. It has to grow both in strength and in usefulness to hold its place among other organizations. It must develop new methods of usefulness to keep abreast of the demands of the time. The fact that it occupies a field of its own will not save it. The encroachments of neighboring organizations that are more progressive will rob it of its prospective membership, and will relegate it with its antiquated methods of operation to a back-corner seat in the chamber of public interest.

The necessity for acquiring and holding a share of public interest is readily understood. That is the goal that every business concern from the little corner grocery to the big fifteen-story department establishment strives for; it is the spotlight that every organization must occupy in order to grow and develop.

There is no secret about the favors shown by public interest. It is exacting at all times. It wants achievement—beneficial achievement; it demands progressiveness—something new. Unless these demands are complied with, the term "back number" is going to be tacked somewhere on the institution that fails to provide them.

It takes working capital to develop new features to meet public requirements. That is a fact that cannot be refuted.

Until the convention at Indianapolis last October the dues of the Jovian Order were $2.00 per annum. From the inception of the Order until that time the dues had not produced a sufficient amount of revenue to defray the current expenses of the organization. There was no surplus for development.

While it is true a number of beneficial features were inaugurated the working out of each plan to benefit the members was harmfully restricted by the small amount of funds available for its establishment and operation.

For this very reason a number of movements that possessed unquestioned merit could not be inaugurated at all.

So the Jovian Order came to the Indianapolis convention in the exact position of the owner of a business whose gross profits are a little less than adequate to meet his operating expenses, and who finds his competitors developing and growing larger and stronger all the time.

The two most pointed arguments advanced against the proposed increase in dues were that the Jovian benefits were not worth four dollars, and that a number of members would drop out if they were increased to that amount.

Perhaps the Jovian Order had not been able to deliver four dollars' worth of organization benefits to all of the rank and file of its members. It had, however, delivered a great big two dollars'

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worth, and that was all that two dollars in dues would purchase.

Concerning the members who might drop out there is just this to say: If the organization had been held back to nurse these weak brothers on low dues it could not develop. There were but two options: raise the dues so that there would be sufficient funds to conduct the organization in a progressive manner, or abandon the hope of keeping it among the leading industrial organizations of the country.

Here is the great question in a nutshell; some of the members of the Order were under the impression that they were not going to receive any more benefits by paying four dollars than they had by paying two. They apparently overlooked the fundamental principle that returns come after and not before the investment is made.

Jovianism is going to deliver four dollars, and more than four dollars, in value per capita to its members this year. There is but one provision. It asks the members to reach out their hands and take the benefits it provides.

After all is said and done, wasn't that the real trouble with those members who could not get two dollars' worth of benefit out of Jovianism? If a man just won't reach out his hand, how does he expect to get anything?

Read "How to Reach Out and Take Your Profit," on pages 18 and 19.

* * * *

THE JOVIAN ANNUAL CONVENTION

THE OFFICERS of The Jovian Order have wisely decided to hold the Annual Convention of the Order as usual during October. With equal wisdom they are making preparations to so shape the Convention that it will be a stimulant to the business of our industry which MUST go on if we are to do our share in supporting our country in the present crisis.

The matter of entertainment will be in the hands of the Jovians in the city in which the meeting is held, but the advice of the officers of the Order will be that all expensive entertainment be entirely eliminated with the money that is usually spent in that manner conserved for the many urgent, patriotic appeals that have been and will be made.

It is to be hoped that the selection of the city will be made with due regard to approximating as nearly as possible the center of Jovian population, in order that the delegates may be under a minimum expenditure of time and money. This matter is in the capable hands of Jupiter Henry L. Doherty, whose decision is expected at an early date.

Due to the many important matters vitally affecting the future operation of the Order to come before the next convention, we believe it very essential that a large and representative number of Jovians attend. We suggest that every effort be made by the Jovian Central Office and all individual Jovians having the welfare of the Order at heart to induce members to make some sacrifice, if necessary, to be present and assist in shaping the future of the Order.

* * * *

JOVIANISM HAS "MADE GOOD"

WHEN THE dues of The Jovian Order were raised from two to four dollars at the Indianapolis Convention, the statement was freely made then and thereafter that the increase was necessary to so bulwark the Order financially that it could deliver to its members the service they demanded.

Something new, something big, something tangible, easily understood and with a dollars-and-cents-value was promised.

The Order has "made good" with a vengeance.

In the new Jovian insurance plan described first in the June issue and briefly covered in this number, the Order now presents the opportunity to members to realize as a direct return from their Jovian affiliation a money profit anywhere from three to ten times the amount of their Jovian dues.

The few men who said this year: "I will pay the increase this year but must be 'shown' to again renew," are now SHOWN. The value is there without the necessity of stretching one's imagination, vision or understanding to appreciate it.

We predict that this benefit, added to the more idealistic, fraternal features of the Order, and to its other material but not quite so tangible benefits is the one finishing touch that was needed, and that—

Jovianism is set for a new era of prosperity that shall be healthy and obtain for all time.

* * * *

WINNIPEG HOLDS SPECIAL LUNCHEON

ENTERTAINS SOLDIER MEMBERS

FORTY-EIGHT members and guests assembled at a special luncheon meeting held at the Hotel St. Charles in Winnipeg, May 31, to entertain two members back on furlough from the battle front in France. They are A. S. Lawrence, Po. 8980, quarter master sergeant, and Joseph Turner, Po. 6010, corporal.

Both of the visiting members gave a short description of their experiences at the front. They have each served twenty-seven months on the battlefields of France and Flanders.

Sergeant Lawrence returned to the front June 20. Corporal Turner will remain in Winnipeg several weeks.

Announcement was made that the date of the annual picnic of the League will be August 4. A special train has been chartered to take members and families to Grand Beach, on Lake Winnipeg, the location selected for the picnic.

Report of Meeting of Fifteenth Congress

(continued from page seven)

tion of the committee with a view to working the suggestion out in its practical details of operation.

Briefly, the plan is as follows:

First, that it is obvious, from figures showing the present membership and the minimum possible expense of operating the Jovian Central Office, that it would be disastrous to contemplate any reduction of the proportion of the dues now going to the Central Office, unless positive assurance could be given of a proportionate increase in membership.

Second, that some incentive should be given to the local League to make sincere and earnest effort to increase its membership and a reward offered commensurate with the results secured. It was believed that these matters could be met by an arrangement whereby the maximum dues to the national office would be $4.00 and the minimum dues $2.00; that the amount of dues, or rather, the per capita tax paid by the local office to the Central Office should be determined by the number of Jovians in good standing represented in its membership; that a bogie be established for each League based upon the population of its city, and that the nearer the Jovian membership approached the bogie the nearer it likewise would approach the minimum per capita tax of $2.00; that the reduction be made in steps at certain stated periods during each year until the minimum figure had been reached.

RESULTS OF THE MEETING

The meeting felt that while it was entirely possible for it to come to some sort of decision on all of the matters which it had considered, it would be unwise to do so because of the fact that while its deliberations had done much to clear the atmosphere of doubt in connection with many matters, it would be best to have a careful investigation by a smaller committee, with revision by a full majority of Congress and Past Jupiters, to be submitted to the regular Annual Convention for final approval or rejection.

Conditions will not permit a special meeting of the Order prior to the Annual Convention. Therefore the meeting of Jupiters and Congress prior to August 20 will be in ample time to make recommendation for constitutional changes at the first meeting at which such changes could be made.

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NOMINATIONS FOR THE 16TH JOVIAN ADMINISTRATION

REGULAR TICKET

NOMINATED BY THE OFFICIAL NOMINATING COMMITTEE

W. N. MATTHEWS, Po. 496-44V, St. Louis, Chairman.
CHARLES W. HOBSON, Po. 1, Dallas.
E. FREEMAN, Po. 7178, Chicago.
JOHN A. BRITTON, Po. 7380, San Francisco.

SIXTEENTH JUPITER

J. F. STRICKLAND, Po. 30,
Texas Power & Light Company, Dallas, Texas.

SIXTEENTH MERCURY

ELL C. BENNETT, Po. 3932-13V,
St. Louis, Mo.

SIXTEENTH CONGRESS

DISTRICT No. 1

WILLIAM R. PHIPPS, Po. 10676,
Brush Electric Company, Galveston, Texas.

DISTRICT No. 2

JOSEPH INSULL, Po. 16729,
General Electric Company, Pittsfield, Mass.

DISTRICT No. 3

Vacant.

DISTRICT No. 4

ARTHUR G. PIERCE, Po. 2896,
Cutler-Hammer Manufacturing Company, Pittsburgh, Pa.

DISTRICT No. 5

ROBERT MONTGOMERY, Po. 6147,
Louisville Gas & Electric Company, Louisville, Ky.

DISTRICT No. 6

JULIEN BINFORD, Jr., Po. 1174V,
Westinghouse Lamp Company, Atlanta, Ga.

DISTRICT No. 7

W. R. POWERS, Po. 2784,
Consolidated Heat, Light & Power Company, Huntington, W. Va.

DISTRICT No. 8

GALEN CROW, Po. 925,
Public Service Company of Oklahoma, Guthrie, Okla.

DISTRICT No. 9

L. O. RIPLEY, Po. 7042V,
Kansas Gas & Electric Company, Wichita, Kan.

DISTRICT No. 10

HENRY N. REMINGTON, Po. 678V,
Central Illinois Light Company, Peoria, Ill.

DISTRICT No. 11

WILLIAM T. WALLACE, Po. 1716,
Idaho Power Company, Boise, Idaho.

DISTRICT No. 12

H. L. WOOLFENDEN, Po. 1062V,
Allis Chalmers Company, Denver, Colo.

DISTRICT No. 13

J. N. COLKITT, Po. 2627,
John A. Roeblings' Sons Company of California, Los Angeles, Cal.

DISTRICT No. 14

Vacant.

DISTRICT No. 15

Vacant.

STATESMEN

ARKANSAS

C. J. GRIFFITH, Po. 13901,
Little Rock Railway & Electric Company, Little Rock, Ark.

ARIZONA, CALIFORNIA

LEWIS E. SPERRY, Po. 9415,
New York Insulated Wire Company, San Francisco, Cal.

IOWA

H. W. GARNER, Po. 19507,
Des Moines Electric Company, Des Moines, Iowa.

INDIANA

WALLACE O. LEE, Po. 11440,
Indianapolis Light, Heat & Power Company, Indianapolis, Ind.

KENTUCKY

J. B. RILEY, Po. 5297,
Westinghouse Lamp Company, Louisville, Ky.

MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA

W. H. VILETT, Po. 3675V,
Sterling Electric Company, Minneapolis, Minn.

MISSOURI

FRED JOHNSON, Po. 177V,
Wagner Electric Manufacturing Company, St. Louis, Mo.

STATESMEN—Continued

NEW JERSEY, DELAWARE

H. C. STERLING, Po. 11014,
Atlantic City Electric Company, Atlantic City, N. J.

NEW YORK

E. G. HINES, Po. 16222,
Electrical World, 239 West Thirty-Ninth Street, New York, N. Y.

OHIO

J. M. BATEMAN, Po. 2610V,
Western Electric Company, Cleveland, Ohio.

OKLAHOMA

CHARLES McCALLUM, Po. 3394,
Western Electric Company, Oklahoma City, Okla.

TEXAS

HIRAM O. CLARK, Po. 6629,
Houston Lighting & Power Company, Houston, Texas.

WISCONSIN

CARL GOLIN, Po. 12385V,
Northwestern Storage Battery Company, Milwaukee, Wis.

(NOTE.—The chairman of the Nominating Committee states that Congressional Districts numbered 3, 14 and 15, and those states not covered by nominations in the above list, are being carefully canvassed, and will be covered by nominations at an early date).

ADDITIONAL NOMINATIONS

The Jovian Constitution provides that, in addition to the "Regular Ticket" selected by the Nominating Committee, any member in good standing may be nominated for any elective office (provided that he is not disqualified by some provision of this Constitution) by a petition signed by not less than one hundred members in good standing, provided that such petition or petitions must be delivered to Mercury not later than the first day of September. Mercury shall publish such nomination, or nominations, in each issue of the Jovian official publication prior to the then next Annual Convention under the heading: "Independent Ticket, Nominated by Petition."

WORLD FREEDOM AS A STAKE

THE GREAT fact that stands out above all the rest is that this is a People's War, a war for freedom and justice and self government amongst all the nations of the world, a war to make the world safe for the peoples who live upon it and have made it their own, the German people themselves included; and that with us rests the choice to break through all these hypocracies and patent cheats and masks of brute force and help set the world free, or else stand aside and let it be dominated a long age through by sheer weight of arms, and the arbitrary choices of self-constituted masters by the nation which can maintain the biggest armies and the most irresistible armaments—a power to which the world has offered no parallel and in the face of which political freedom must wither and perish.

* *

Through all sorts of channels it (peace talk) has come to me, and in all sorts of guises, but never with terms disclosed which the German government would be willing to accept.

President Wilson, in Flag Day address, June 14.

* * * *

MILWAUKEE JOVIAN BOWLING LEAGUE PRIZE WINNERS

THE MILWAUKEE Jovian Bowling League closed a very successful season April 12, the final games being played on the Century Alleys. In addition to providing a great deal of diversion and recreation during the winter months, the bowling contest proved successful in bringing the members of the fraternity together in a social way.

Following is the standing of the teams at the finish of the contest:

Team	Captain	Per Cent Won
Mars	H. E. Brauns, Po. 16618	555
Neptunes	I. R. Douglass, Po. 18360	541
Mercuries	R. Fishback, Po. 18361	527
Vulcans	F. V. Ziekursch, Po. 16625	514
Plutos	B. A. Bovee, Po. 16617	445
Jupiters	Edmund Boggis, Po. 7345	418

The three leaders in individual averages are Leroy Day, Po. 18990, average 158; J. W. Pfeifer, Po. 10981, average 157, and A. H. Sprecher, average 154.

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PERSONAL POINTERS

I've often wonder'd what became of friends
I used to know;
The friends I knew and parted from in days
of long ago.
'Tis strange how memory reverts and shows
upon its screen,
The face of some long absent friend or
half-forgotten scene.
And as the hand of Father Time leads on
to where life ends,
A fellow sets a greater store by memory
of friends.

* * * *

FRED H. SCARBOROUGH, Po. 8395, has moved his business and offices from the Denckla Building to 5503 Chew Street, Philadelphia.

* * * *

OSCAR L. KUHS, Po. 15702, formerly with the Frank Adam Electric Company, St. Louis, Mo., has established a manufacturers' agency in that city.

* * * *

HENRY D. SEARS, Po. 2944, general sales agent for the Weber Electric Company, at Boston, Mass., has removed his offices from 131 State Street to 80 Boylston Street.

* * * *

E. M. THOBEN, Po. 13338, who until recently was connected with Tafel Electric Comany, Louisville, Ky., has been appointed sales manager of E. D. Morton & Company, of Louisville.

* * * *

FRITZ BLAND, Po. 2583, who for the past two years has been at Nogales, Ariz., has returned to Dallas, Texas. He is connected with the Southwest General Electric Company in that city.

* * * *

A. F. TRAVER, Po. 2357, superintendent of the Denver Gas & Electric Company, Denver, Colo., was recently appointed manager of the Spokane Gas & Fuel Company, of Spokane, Wash.

* * * *

C. J. LITSCHER, Po. 1868, proprietor, C. J. Litscher Electric Company, Grand Rapids, Mich., was elected president of the Automobile Business Association at its recent convention.

* * * *

W. L. MILLER, Po. 18421, of Galena, Ill., has been appointed park commissioner by the mayor of Galena. Jovian Miller is manager of the Interstate Light & Power Company in that city.

* * * *

L. A. SCHLOSS, Po. 9408, sales agent with the General Electric Company, San Francisco, has been commissioned a first lieutenant in the Officers' Reserve Corps. He is now in training at Camp Presidio.

* * * *

LESTER H. LEWIS, Po. 8669, of the New York City office of the General Electric Company, announces the removal of the company's offices from 30 Church Street to the Equitable Building, 120 Broadway.

* * * *

S. GREENFIELD, Po. 3349, who has been connected with the Western Electric Company at Philadelphia for a number of years has been appointed sales manager of the Baltimore branch of that company.

* * * *

FRED BAKER, Po. 9309, new business manager of the Sierra & San Francisco Power Company, San Francisco, has been commissioned captain and quartermaster in the United States Officers' Reserve Corps.

JOHN W. LIEB, Po. 11977, vice-president, New York Edison Company, who was elected president of the National Electric Light Association at its recent convention in New York City. Jovian Lieb is also chairman of the Special Committee on War Conditions of the Public Policy Committee

F. A. C. TOCQUE, Po. 13340, until recently connected with the Louisville (Ky.) Gas & Electric Company, has been appointed commercial manager of the Ft. Smith Light & Railway Company, Ft. Smith, Ark.

* * * *

V. C. NEWMAN, Po. 15507, formerly district salesman for the Louisville (Ky.) Gas & Electric Company, has resigned to accept the position as manager of the West Pennsylvania Laundry Company, Canton, Ohio.

* * * *

MORGAN T. COAKLEY, Po. 16870, of the Robertson-Cataract Electric Company, Buffalo, N. Y., is now first lieutenant, Corps of Engineers, and has reported for active service at Madison Barracks, Watertown, N. Y.

* * * *

JOHN B. MILLER, Po. 17152, president of the Southern California Edison Company, Los Angeles, was recently called to Washington as one of the committee of five who have charge of financing the American Red Cross.

YOU CAN BE A JOVIAN
PAY YOUR DUES
AND BE AT LEAST
NINE DOLLARS
THE RICHER!

READ PAGES EIGHTEEN AND NINETEEN

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BRUCE CAMERON, Po. 10790, superintendent of transportation, United Railways, St. Louis, Mo., who was elected president of the Missouri Association of Public Utilities, at its recent convention. Jovian Cameron has been actively identified with the association for a number of years, and was previously its vice-president

Chas. J. French, Po. 12470, formerly with the Economy Fuse & Manufacturing Company, Chicago, has enlisted in the American Ambulance Corps, and expected to leave for France some time in the early part of June.

* * * *

Bernard Otting, Jr., Po. 18593, until recently sales engineer for the Buckeye Equipment Company of Cincinnati, Ohio, is now Ohio agent and salesman for the Boxill & Bruel Carbon Company, of Indianapolis, Ind.

* * * *

Lewis A. McArthur, Po. 7786, general manager of the Pacific Power & Light Company, Portland, Ore., was recently elected a member of the executive committee of the Northwest Electric Light & Power Association.

* * * *

N. C. Draper, Po. 18395, manager of the Sioux Falls (S. D.) division of the Northern States Power Company, was elected president of the South Dakota Electrical Association at the recent meeting of that organization.

* * * *

L. R. Murphy, Po. 18185, First Tribune, Hamilton, Mo., has removed from that point to Seneca, Kan. Jovian Murphy advises that his new headquarters are nearer the center of the territory he covers as traveling salesman.

F. W. Paterson, Po. 7948, formerly a member of the sales force of the General Electric Company, San Francisco, has been transferred to the Schenectady office of that company. He assumes charge of the switchboard sales.

* * * *

Bryan W. Mendenhall, Po. 3899, manufacturer of electrical specialties at Salt Lake City, has left the electrical field. He is now manager of the Salt Lake City branch of the Miller-Cahoon Company, automobile distributors.

* * * *

Howard N. Bates, Po. 1919, until recently connected with the commerical department of the Houston Lighting & Power Company, Houston, Texas, is now commercial manager of the Public Service Corporation, Tulsa, Okla.

* * * *

H. W. Monahan, Po. 13224, of the Kammistiqia Power Company, Ltd., Fort William, Ont., and president of the Port Arthur-Fort William Jovian League, has answered the call of Old Glory and enlisted with Uncle Sam's fighting forces.

* * * *

V. C. Gilpin, Po. 452, vice-president of the Triangle Conduit Company, 50-54 Columbia Heights, Brooklyn, who has been making a tour of the country spent several days in St. Louis recently and visited the Central Offices of the Order.

* * * *

T. D. Crocker, Po. 9140, has been appointed assistant general manager of the Northern States Power Company. He assumes the position in addition to that he holds as assistant general manager of the Minneapolis General Electric Company.

* * * *

W. O. Custer, Po. 6246, formerly manager of the commercial department of the Mansfield (Ohio) Railway & Light Company, is now general manager of the Massillon Electric & Gas Company, Massillon, Ohio. He succeeds T. O. Kennedy, Po. 12298.

* * * *

George W. Robinson, Po. 11853, president of the Tri-State Telephone & Telegraph Company, St. Paul, Minn., was recently elected president of the United States Independent Telephone Association. He succeeds Charles Y. McVey, who resigned.

* * * *

A. T. Schnaible, Po. 16774, formerly traveling salesman for the Duncan Electric Company, of Lafayette, Ind., with headquarters at Kansas City, Mo., has enlisted, and is at present at the citizens training camp, Fort Benjamin Harrison, Ind.

* * * *

G. D. Longmuir, Po. 14727, has resigned his position as district manager for the Pacific Power & Light Company of Prasco, Wash., and will engage in business for himself. He is one of the incorporators of the Reliance Electric Company, Tacoma, Wash.

* * * *

C. R .Young, Po. 11246, formerly secretary to the vice-president and general manager of the Pacific Power & Light Company, Portland, Ore., has been appointed sales manager of the company. His headquarters are at the Portland office of the company.

* * * *

F. O. Lightfoot, Po. 10949, of Chicago, was proclaimed the winner for the salesman securing the largest number of new cus-

$ MONEY $ MONEY $ MONEY $

A THOUSAND PLACES TO PUT ONE DOLLAR THESE DAYS. THE JOVIAN BENEFIT INSURANCE PLAN HELPS YOU CONSERVE YOUR INCOME. READ PAGES 18-19.

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tomers during March, by the Western Electric Company. A. B. SPICER, Po. 1171, of St. Louis, led in the contest for the period ended March 31.

* * * *

E. C. DEAL, Po. 17246, recently resigned as vice-president of the North Carolina Public Service Company, of Greensboro, N. C., and on June 1, assumed the duties of general manager with the Trinidad Electric Transmission Railway & Gas Company, Trinidad, Colo.

* * * *

FRANK L. PERRY, Po. 668, who for a number of years was business manager of the Western Electrician, of Chicago, now connected with the Fidelity Insurance Company, Baltimore, Md., was one of the members elected to merit membership by the Jovian League of Chicago, recently.

* * * *

HARRY J. HORNUNG, Po. 5370, has tendered his resignation as secretary of the Fullerton Electric Company, New York City. He has been connected with the company for five years. His present plans are to take a vacation. Later he will consider one of several positions offered him.

* * * *

C. NESBIT DUFFY, Po. 7351, vice-president, Manila Electric Railroad & Light Company, Manila, P. I., was recently elected president of the Friendly Sons of St. Patrick. Before going to the Phillipines, Jovian Duffy was comptroller of the Milawukee Electric Railway & Light Company.

* * * *

W. LAWRENCE WESTON, Po. 2215, was recently transferred from the management of the Paducah (Ky.) Light & Power Company, to the management of the Stone & Webster Utilities, Houghton, Mich. He is now general superintendent of the Houghton County Electric Light Company.

* * * *

WALTER W. REED, Po. 84, former chief electrician and superintendent of power for the Houston Lighting & Power Company, Houston, Texas, now with the Herlock System, has just received the appointment as the superintendent of construction of a 6600-volt transmission line from Groesbeck to Thornton, Texas.

* * * *

WILLIAM T. DEAN, Po. 10894, who has been in charge of the power and mining department of the General Electric Company for the past nine years has resigned from that position to become president of the General Combustion Company. His headquarters are at the general offices of the company, Monadnock Building, Chicago.

* * * *

T. E. BURGER, Po. 2624, has resigned as assistant sales manager of the Western Electric Company, at San Francisco, and is now manager of the Baker-Joslyn Company, Los Angeles. Jovian Burger was with the Western Electric Company at Los Angeles until a few months ago when he was promoted and transferred to San Francisco.

IF YOU HAVE SOMETHING LIKE IT— IT COSTS YOU MORE.

YOU MUST MAKE YOUR DOLLARS DO THEIR FULL DUTY.

READ HOW — PAGES 18-19.

H. W. ALEXANDER, Po. 17191, Statesman-at-Large, head of the Publicity Department, Society for Electrical Development, who is deserving of much credit from Jovians for his effective participation in Jovian affairs

ROBERT ABBOTT, Po. 6761, who has been connected with the sales organization of the Bryant Electric Company, and has managed its New York office since it was opened in 1913, has volunteered for service in the Roosevelt Base Hospital Unit and sailed for France last month. Our best wishes go with Jovian Abbott in his work at the front.

* * * *

T. O. KENNEDY, Po. 12298, for the past three years general manager of the Massillon (Ohio) Electric & Gas Company, has been made general superintendent of the Denver (Colo.) Electric & Gas Company by the Henry L. Doherty interests. Jovian Kennedy gave a farewell dinner to about forty of his friends on the eve of his departure from Massillon.

* * * *

DONALD MCDONALD, Po. 13317, vice-presidnet and general manager, Louisville Gas & Electric Company, has taken a very active part both in the conscription registration and in the campaign to sell Liberty Bonds in Louisville. He was chairman of the registration board of two wards and was a member of the board directing a five-day Liberty Bond selling campaign.

* * * *

B. T. BURT, Po. 13240, who for the past two years has been vice-president and general manager of the Rutland Railway, Light & Power Company, Rutland, Vt., has accepted a position as assistant to the chief executive of the Mexican Light & Power Company, Mexico City, Mexico. Jovian Burt will assist in the management of the engineering and operating departments of the Mexican and subsidiary companies.

* * * *

CLOVIS M. CONVERSE, Po. 7808, who last fall became associated with J. W. COPELAND, Po. 9139, and W. T. White, as sales engineers, establishing the firm of Copeland, White & Converse, at Minneapolis, Minn., has purchased Jovian Copeland's interest. The name of the firm is now White & Converse, with offices at 1124 Metropolitan Life Building, Minneapolis, and 420 Merchants National Bank Building, St. Paul.

* * * *

R. H. BALLARD, Po. 13240, secretary and general manager of the Southern California Edison Company, Los Angeles, was made vice-preident upon the consolidation of that company with the Pacific Light & Power Corporation. Jovian Ballard was the first president of the Pacific Coast Section of the National Electric Light Association. He was elected second vice-president at the recent convention of the organization.

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A Jovian Code of Ethics

AT THE April meeting of Jovians at Cleveland, Ohio, which was called for a discussion of new ideas, a request was made that a code of ethics be prepared for The Jovian Order to be submitted to the next Annual Meeting for consideration.

A Jovian code of ethics is not difficult to write.

"Do unto others strictly as you would have others do unto you" is the keynote.

Give every Jovin your brotherly interest and feeling just so long as he deserves it.

Make the word "Jovian" synonymous with "sympathy" for who shall pass throughout life without need of it?

Our use of the word "Jovian" is almost unique in its application to the affairs of this world. Formerly it related only to the mythological "Jupiter." Hence the word "Jovian" has been materialized for the first time, perhaps, by The Jovian Order, and it can never de disassociated from it by historians of the future when they are called upon for an application of the term.

Its code of ethics should be so high as to reflect honor upon both the theme and its application.

CHAS. A. NEWNING, Po. 2,
Fourth Past Jupiter.

A. M. COLLINS, Po. 4840, who has been connected with the supply quotation department of the Western Electric Company in Chicago since 1914, has been appointed sales manager at the Detroit branch of the company, the change becoming effective May 14. Jovian Collins has been connected with the Western Electric Company for eleven years. Prior to his service at Chicago he was telephone apparatus salesman at Indianapolis.

* * * *

HERBERT H. LUEDINGHAUS, Po. 19215, sales agent, St. Louis Malleable Casting Company, St. Louis, Mo., is one of ten young men who purchased a yacht for $20,000, and contributed its use to the government for the "Mosquito" fleet. Jovian Luedinghaus and his nine companions, all occupying lucrative positions, have enlisted in the Navy. After a regular course of training they will be assigned as the crew of their boat, under regular officers of the Navy.

* * * *

T. D. CROCKER, Po. 9140, assistant general manager of the Minneapolis General Electric Company, has been appointed assistant general manager of the Northern States Power Company. Jovian Crocker began his career in the electrical industry with the Milwaukee (Wis.) Electric Railway & Light Company. He was later connected with the Consumers' Power Company at St. Paul, from which he was transferred to the Minneapolis General Electric Company.

* * * *

W. R. PINCKARD, Po. 314V, former president of the Chicago Jovian League, special representative of the Westinghouse Electric & Manufacturing Company, has been temporarily transferred to the Minneapolis branch of the company to fill the gap caused by resignations of salesmen who have enlisted in the Navy. Jovian Pinckard has been actively engaged in the electrical business in Chicago for thirty years. During the past twenty years he has been connected with the Westinghouse Company.

* * * *

HENRY H. HUMPHREY, Po. 9051, consulting electrical and mechanical engineer, St. Louis, Mo., is now associated with Edward Flad, under the firm name of Flad-Humphrey Engineering Company. Jovian Humphrey is vice-president and treasurer of the firm. They will engage in the general practice of engineering including the complete design of industrial plants, buildings, power plants, electric plants, water works, sewer systems, etc. The offices of the firm are 1312 Chemical Building, St. Louis, Mo.

* * * *

N. C. DRAPER, Po. 18395, manager of the Sioux Falls (S. D.) division of the Northern States Power Company, was recently elected president of the South Dakota Electrical Association. Prior to his affiliation with the Sioux Falls lighting interests in 1911, Jovian Draper was vice-president and general manager of the Eastern Wisconsin Railway & Light Company, of Fon du Lac, Wis., and later was connected with the Zanesville (Ohio) division of the Columbus, Newark & Zanesville Electric Railway.

* * * *

W. L. CUMMISKEY, Po. 1070, president of the Electrical Material Company, St. Louis, of which C. R. Baldwin, Po. 2911, is vice-president and C. J. Cummiskey, Po. 15640, is secretary, announces that his firm has recently acquired the southwestern agency for the Triangle Conduit Company, manufacturers of flexible steel-armored conductors and flexible non-metallic conduit. The company's offices are at present at 1213 Pine Street, but in order to take care of increasing business, a new building has been leased at 1422 Pine Street and will be occupied by the firm about August 1.

* * * *

WILLIAM J. ROSE, Po. 10595, recently resigned his position as treasurer and general manager of the Alliance (Ohio) Gas & Power Company, to engage in business for himself. Jovian Rose has been prominently active in work of the gas and electrical industry in both sttate and national organizations. He was at one time president of the Ohio Electric Light Association, and is now chairman of the executive committee of that organization. He is also president of the Alliance Rotary Club and a director in other clubs and organizations. At a farewell dinner tendered him by the employees of the Alliance Gas & Power Company, he was presented with a beautiful table lamp in appreciation of his work.

* * * *

AN ERROR

In the May issue of The JOVIAN we stated that W. E. Robertson, Po. 424, Past Jupiter Six, was president of the Republic Electric Company, of Cleveland. The announcement should have read The Republic Electric Company, of New York State, with headquarters at Buffalo, of which Past Jupiter Robertson was at one time president.

Write a Jovian Song

The B. H. Stief Jewelry Co.

offers a handsome piece of Jewelry for the best Jovian Song, to be selected by

JAS. A. CAYCE, Po. 2416, and
ELL C. BENNETT, Po. 3932-13V, Mercury

All Jovians are eligible to participate in the contest. Submit your songs, either with or without music to

JOVIAN ORDER
1415 Syndicate Trust Building
ST. LOUIS, MO.

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NEWS OF JOVIAN LEAGUES

Chicago

One of the most interesting talks of the year was given before the Chicago League May 17, by John B. Newman, State Food Commissioner. His subject was "Why a Food Law?" He explained how the State Food Commissioner's office has been responsible for the protection of citizens and the prosecution of state food law violators.

George C. Keech, Po. 10938, introduced the speaker.

George H. Jones, Po. 12259, vice-president of the League, presided.

Anthony Czarnecki, war correspondent for the Chicago Daily News, addressed one of the largest gatherings the League has had this year on May 24. His description of Prussian military caste which has crushed and is continuing to crush out the free spirit of Poland was one of the most dramatic recitals of war conditions the audience has heard.

Dr. S. S. Spencer, of the American Red Cross, gave a short talk, explaining what the organization is doing.

Another record attendance turned out May 31, to hear Count Alexander M. Lochwitzky's address, "The Old and New Russia." Count Lochwitzky, who was born in Petrograd and had the experence of being exiled to Siberia, gave a graphic description of conditions under the old Russian regime.

Homer E. Niesz, Po. 306V, Past Jupiter Thirteen, and W. H. Hodge, secretary of the League, spoke on "The Liberty Loan."

An extra meeting of the League was called June 7, to give the members the opportunity to hear A. R. Bunker, president of the Navy League, speak on "Industrial Unpreparedness."

This was the last meeting of the season.

* * * *

Los Angeles

"Aeroplanes and Their Use in War," was the subject of an address before the Los Angeles League May 16. The speaker was Walter Wright Alley, engineer for the Western Department of the Wright-Martin Corporation.

Florence Wallace, operatic soprano, late of the Orpheum Circuit, was the entertainment attraction.

F. M. Sinsabaugh, Po. 1317, officiated as chairman.

Two short talks were given May 23 by Cora B. Taylor, vice-president of the California Congress of Mothers and Teachers Association, and Elizabeth McManus, member of the Social Service Commission of Los Angeles.

Prof. A. T. Atkins was the principal speaker of the occasion. His subject was "Choosing a Vocation and the Scientific Placing of Employes."

F. T. Maessen, Po. 14246, presided as chairman.

There were two speakers June 6. H. M. Haldeman, vice-president H. R. Boynton & Company, took for his subject, "The Business Man in Governmental Affairs", and Albert Z. Monell, public corporation accountant, spoke on "The Common Law Companies and Statutory Corporations."

Richard Wolfsberg, Po. 18088, was chairman of the day.

* * * *

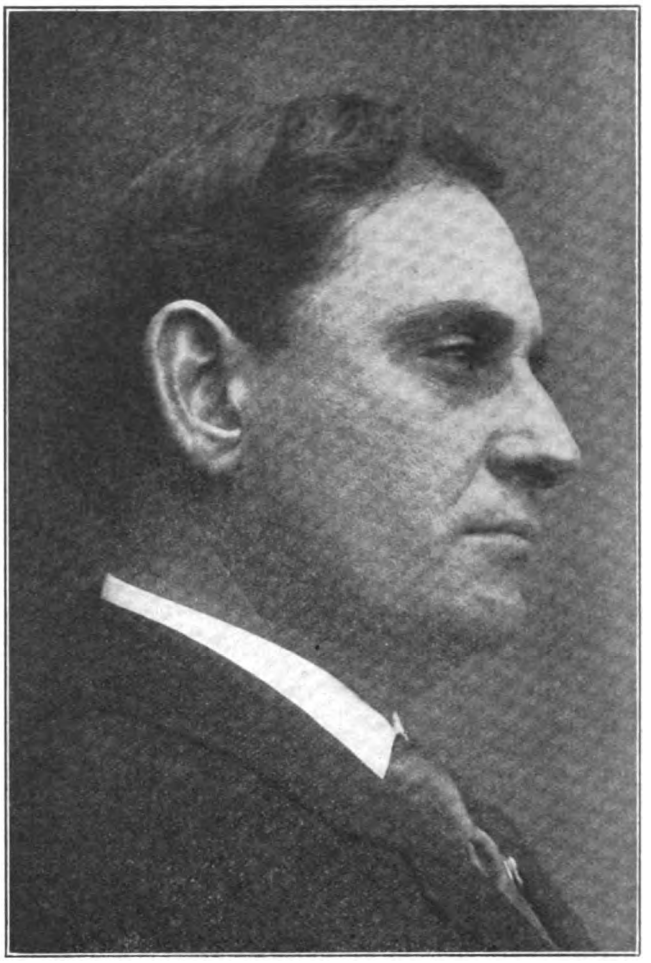
St. Louis

May 22 was Liberty Loan Day at the St. Louis Jovian League No. 20. F. O. Watts, president Third National Bank, was the speaker and outlined the importance of the people responding liberally to the country's call for funds.

H. J. Pettengill, Po. 119, president, Southwestern Telegraph & Telephone Company and past president of the League, presided as chairman.

Rev. J. M. Robinson, rector Vail of Avoca, Church of Ireland, also addressed the meeting and gave an interesting description of conditions the war has produced in Ireland.

A special memorial meeting was held May 29. Hon. Colin M. Self, postmaster of St. Louis, made a stirring patriotic address. He was followed by W. E. Bilheimer, who has been very active in recent organization movements.



C. E. MICHEL, Po. 9061, First Tribune, manager electrical appliance department, Union Electric Light & Power Company, St. Louis, Mo., who continues as chairman of the Electric Range Committee of the National Electric Light Association. Jovian Michel has been very active in promoting the interests of electrical organizations and has rendered valuable service to the Range Department of the N. E. L. A.

Announcement was made that the annual boat excursion of the League would be held Friday, July 20.

Eugene Abadie, Po. 9015, presided as chairman of the meeting.

Owing to the convention of Advertising Clubs, the regular luncheon of June 5 was postponed to June 8.

The meeting was under the auspices of the Light and Development and Allied Companies.

Hugo Wurdack, Po. 9655, president of the companies, presided as chairman and introduced as speaker, Judge I. R. Kelso.

It was announced that every member attending the previous meeting had either subscribed or promised to subscribe for a Liberty Bond.

E. J. McCaustland, dean and director, School of Engineering, University of Missouri, was the speaker June 12. His subject was "How Efficiency Wins."

C. L. Matthews, Po. 685V, member of the firm of W. N. Matthews & Bro., officiated as toastmaster.

* * * *

San Francisco

Dr. Thomas Addison, Po. 6967, Pacific Coast manager of the General Electric, was speaker of the day, June 6, addressing one of the largest and most enthusiastic audiences of the year.

Dr. Addison chose for his subject "The War's Effect on the

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Electrical Business." His address was one of the most eloquent and interesting the League has ever enjoyed.

Stanley Walton, chairman of the commercial committees of the Pacific Coast Section, N. E. L. A., outlined the proposed activities of his organization for the coming year.

S. M. Kennedy, Po. 17072, of the Southern California Edison Company, Los Angeles, paid a glowing tribute to the growing spirit of co-operation among men of the electrical industry.

E. O. Shreve, Po. 9411, of the General Electric Company, officiated as chairman of the meeting.

* * * *

Cleveland J. E. Latta, member of the Underwriters' Laboratories of Chicago, was the speaker at the Cleveland luncheon meeting, May 17. He addressed the League on "New Tendencies in Safety Work."

Henry N. Staats presided as chairman.

The "One Hundred Point Committee" Trophy won by the Cleveland League was on exhibition.

Charles F. Brush, Po. 2391, capitalist and philanthropist, addressed the meeting of May 24. His talk was along the lines of scientific research, and was very interesting.

Carl Osborne, of the firm of Borton & Borton, gave a short talk on "The Liberty Bonds."

Dr. E. P. Hyde was chairman of the day.

Announcement was made of the approval of an amendment to make the annual dues of the League $12.00 per annum and allow 50 cents discount each quarter if paid before the twenty-first day of the first month of the quarter.

The annual meeting and election of officers and directors of the League was held May 31. Report of officers elected will be found on another page.

The reception committee instituted a new method of supplying visitors with a lapel button indicating that they are guests.

Henry Bailey Turner, director of the Chautauqua School of Arts and Crafts, New York, was the speaker June 7.

Announcement was made of the death of J. H. Shields, a member of the League.

* * * *

Dallas The principal speaker of the luncheon meeting of the Dallas League, June 18, was C. S. Dawley, assistant general manager of the Southern Ice & Utilities Company. He gave an interesting explanation of the manufacture of ice.

B. K. Howard, Po. 1231, president of the League, presided as chairman.

The question of discontinuing the meetings of the League during the summer months was postponed until the next meeting, when it will be voted on.

* * * *

Benton Harbor The annual election of officers took place at the meeting of the Benton Harbor League May 8, at the Pure Food Cafe, and resulted as follows: President, C. O. Nichols, Po. 15537; vice-president, E. Welker, Po. 15540; secretary-treasurer, L. P. Briggs, Po. 15523; directors, L. J. Harper, Po. 16657, Carl Burchards, Po. 19049, Earl Frakes, Po. 15527, and Robert E. Curtis, Po. 19050.

At the banquet held in connection with the election, John A. Cavanaugh, Po. 11199, First Tribune, presided as toastmaster.

Addresses were made by W. J. Trott, Po. 2685, Fifteenth Triton, John Rohl, Po. 16520, and E. Welker, Po. 15540.

* * * *

Kansas City About three hundred and fifty members, including their families and friends, enjoyed the annual excursion given by the Kansas City League, June 11.

An invitation had been extended to the Engineers' Club, and about one hundred members of that organization participated in the event. The Steamer Chester was chartered for the purpose and at eight o'clock, the time set for its departure, there was as large a crowd aboard as could be comfortably accommodated.

Arrangements and management of the excursion was under the direction of First Tribune J. F. Bratney, Po. 17779.

NEW JOVIAN YELL

By J. M. Bateman

J. M. BATEMAN, Po. 2610V, WESTERN ELECTRIC MANAGER AT CLEVELAND, FIRST TRIBUNE, PRESIDENT CLEVELAND ELECTRIC LEAGUE, JOVIAN CHAPTER, AND ALL AROUND "GO GETTER," OFFERS THE FOLLOWING. IT WORKS GREAT IN A CROWD.

TRY IT!!!

ONE LOUD SLAP UPON THE KNEES, A POUND UPON THE TABLE, CLAP YOUR HANDS, RAISE YOUR RIGHT HAND AND BRING IT DOWN SLOWLY AS YOU GIVE A LONG WHISTLE ASCENDING IN PITCH, THEN A LONG "AH," IN A SIGHING TONE AND CONCLUDE WITH THE WORD, "JOVIAN."

WANTS ENGINEER OR WIRELESS EXPERT FOR BATTALION

TERRY W. ALLEN, Po. 16838, president of the Allen Properties, Corinth, Miss., is organizing a battalion which comprises two wire companies, and has called on The JOVIAN for help in locating a man who can qualify either as captain or first lieutenant.

The qualifications essential are that the applicant be a telephone engineer or a wireless expert. It will also be necessary to pass the regular examination.

Communications on the subject should be directed to T. W. Allen, Corinth, Miss.

The chairmen and vice-chairmen of the reception committee were Mr. and Mrs. F. L. Funsten and Mr. and Mrs. A. Penn Denton.

Among other diversions, dancing was participated in on the trip, which proved a very delightful affair.

* * * *

Oakland, Cal. About two hundred and fifty members and guests were in attendance at the smoker given by Oakland Jovians on the evening of May 29, at the Hotel Oakland. Numbered among those present were one hundred visitors from San Francisco.

Arrangements for the big meeting were perfected by Walter C. Martinez, Po. 18941, Raymond T. Kahn, Po. 9372, and F. H. Woodward, Po. 1767, who constituted the program committee.

Prof. Clarence Corey made an inspiring address in which he alluded to the support being given to the Liberty Bond issue by the electrical industry.

Wallace W. Briggs, Po. 1288, and Frank A. Leach, Jr., according to reports, were very active in making the affair a success.

* * * *

New York More than five hundred seats were required to accommodate members of the New York League who with their families and friends attended the Billy Sunday Tabernacle on the evening of May 26. It proved to be one of the big events of the year.

"Inside Facts About Conditions in Germany" was the subject of an interesting address delivered before the League, June 6, by Herbert Bayard Swope, city editor New York World. Mr. Swope was in Germany to study conditions for his paper and returned just before America declared war. He gave an interesting description of the condition of the country.

Announcement was made of the Beefsteak Dinner and Stag to be held June 19 at the Harlem Yacht Club, City Island, by the League.

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AINSLIE A. GRAY CLOSES FIFTEEN YEARS OF CONTINUOUS SERVICE FOR READERS, ADVERTISERS AND PUBLISHERS

AN ACTIVE, continuous service of fifteen years for all interested in the Electrical Review and Western Electrician has been brought to a close by the resignation of Ainslie A. Gray, vice-president and general manager of that company. Mr. Gray leaves the organization to carry out a long-cherished ambition to engage in business of his own. In this he has the best wishes of all his old associates, who while deeply regretting the severance of what have been such pleasant business and personal relations are eager to see him prosper in his new undertaking.

Mr. Gray's splendid career is a fine example of an American's achievement of success through his own unaided efforts and against great difficulties, for from quite early youth he was dependent on his own resources. Born in Brooklyn on August 1, 1877, he attended the public schools until fourteen, when the death of his father compelled him to give up an ambition to study medicine and to seek employment instead. This he found in various printing shops of New York, both small and large. In contrast to the large mass of youths of a metropolitan city, young Gray did not idle away his evenings after his day's tasks were done, but employed them usefully in continuing his education.

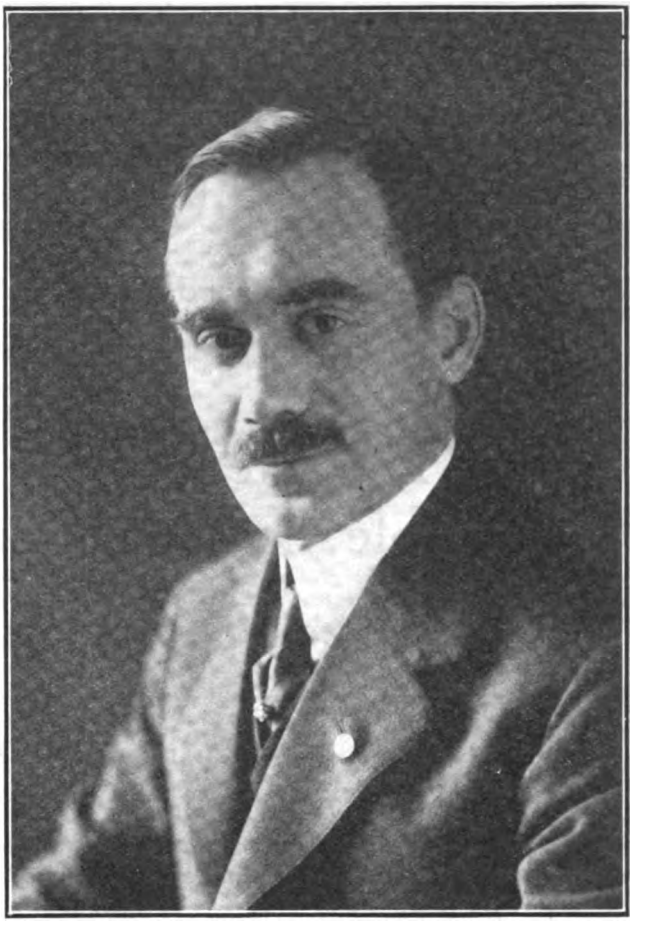
For nine years he attended the evening classes of Cooper Union and later of Columbia University in New York. These were strenuous years of constant application, during which were laid the foundations of a broad scientific and literary education and an extraordinary capacity for hard and persistent work. The Cooper medal and diploma were won in the five years' general and scientific course, after which a special course in English literature, rhetoric and composition was undertaken at Columbia, under Professors Quackenbos and Butterick.

Throughout all this time Mr. Gray was also learning the printing business, being employed by day in several print shops and especially those of the large New York dailies, notably the Journal and World. Practically every branch of the printer's trade was mastered and then special study was given to typesetting machines, Mr. Gray serving as an expert in the development of inventions in this line in the interest of James R. Keene. He later became associated with the Merganthaler Company, and installed the first battery of Linotype machines in the plant of the James Kempster Printing Company, which was then the foremost printer of electrical publications, handling all the work of the Electrical Review, the National Electric Light Association, etc.

Here Mr. Gray became acquainted with the publishers of the Electrical Review, and in 1902 joined its staff at a greatly reduced salary, but in furtherance of his desire to enter technical journalism, for which he was now well qualified in practically every way. Beginning as a proofreader on a special issue, he readily assumed editorial duties. In the latter part of that year the technical editor, Charles Tripler Child, died and a great deal of work was thrown on the young editor, until he was relieved of the additional duties by the appointment of William Hand Browne, Jr., to take up Mr. Child's work. Mr. Gray rapidly absorbed the publishing business, making such headway in it that in 1905 he was appointed managing editor, Mr. Browne retaining his title of technical editor.

On November 1, 1908, the Electrical Review Publishing Company purchased the Western Electrician, and Mr. Gray became the managing editor of the consolidated paper, and went to Chicago to take charge of the combined editorial departments. During the following year he was also made general manager of the company, thus assuming general direction of all its departments. In 1914 he was elected vice-president.

While broadening the business of the Electrical Review and Western Electrician, Mr. Gray has taken active part in various electrical organizations, especially the Jovian Order, of which



A. A. GRAY, Po. 2271

he was Statesman-at-Large and in whose behalf he has made countless speeches all over the country. He also aided in the organization of the Society for Electrical Development. In 1911-12 he was president of the Electric Club of Chicago. Through these and other electrical circles Mr. Gray has made a host of friends, and he probably is as well thought of as any man in the electrical industry.

For many years Mr. Gray has also been very active in publishing circles. In 1913 he was vice-president of the Chicago Trade Press Association and during the following year he served as its president. In 1915 he was elected president of the Federation of Trade Press Associations, which was the national organization of this industry. When this body was reorganized in March, 1916, as the Associated Business Papers, Incorporated, Mr. Gray was continued as its president, and at the annual meeting last October was re-elected for another year. Through the reorganization, which has been effected under Mr. Gray's leadership, this association has become a strong force in the upbuilding of the trade-publishing industry. Among notable things it has done is the defensive campaign carried on last winter against prohibitive postal rates, which required much attention by Mr. Gray.

Mr. Gray will continue to reside in Chicago, where in the southern portion of the city he has a comfortable home presided over by his charming wife and two daughters.

CASH DIVIDENDS FOR YOU!

PAGES EIGHTEEN AND NINETEEN WILL TELL YOU ALL ABOUT IT.

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Now Collect

You Good Fellows Who Showed Confidence Enough in Jovi

It's The New, Big Dividend For You. Made Possible By Additional Central Office Service.

Reach Out and Take Your Share!

REMEMBER!

Every cent of the saving made through this new Jovian plan is given to the members. Not one penny is paid to or retained by The Jovian Order, its central office, its local chapters, or any of its officers for the costly and effective service they are rendering to produce and operate this proposition.

It is The Jovian Order's fulfillment of its promise to deliver a greater, tangible, direct-to-the-member benefit in consideration of the increased dues.

Read With Your Mind!

No. 1. Any Jovian n good-standing may by application to the Jovian Central Office now secure Accident Insurance, substantially identical with the Twenty-five-Dollar policies issued by the largest Accident Companies, upon payment of a premium of only Twelve Dollars,—net saving Thirteen Dollars.

No. 2. Or, in the same manner a Jovian may secure Health Insurance of a value of Thirty-five Dollars for Twenty Dollars,—net saving Fifteen Dollars.

No. 3. Or, one Accident and one Health Policy,—net saving Twenty-eight Dollars.

No. 4. Or, a Double Accident Policy,—net saving Twenty-six Dollars.

No. 5. Or, a Double Accident and one Health Policy,—net saving Forty-one Dollars.

HOW APPLICATIONS ARE MADE

Application is made by a Jovian to the Jovian Central Office upon a simple form furnished Jovians upon request. **NO MEDICAL EXAMINATION IS REQUIRED**

HOW THE SAVING IS EFFECTED

There is no mystery attached to the reason why this insurance can be sold to Jovians at so much less than it can be purchased in the open market. There is a REASON. It is NOT because the policies are not equally desirable. It is NOT because the Insurance Company is writing this business without a reasonable profit.

The saving is made because the insurance is going direct from the insurance company to the individual MINUS ANY AGENT'S COMMISSIONS AND MINUS ANY OFFICE DETAIL EXPENSE. The Jovian Central Office, as a direct service to Jovians, is filling the place usually occupied by general and sub-agents and is taking care of office and collection details WITHOUT CHARGE.

Thus, this insurance is going direct from the source to the purchaser STRIPPED BARE OF EVERY EXPENSE save only adjustments, actual losses and a reasonable return to the insurance company.

THE COMPANY BACK OF THE POLICIES

The company writing this insurance (Employers' Indemnity Corporation) is a Missouri corporation,—an additional advantage, for it is well known that the laws of that state are particularly favorable to insurance policy holders.

An exhaustive investigation, carried on over a period of many months by the Jovian Central Office, extending into the financial strength, the record for equitable adjustments, the efficiency of management and the personnel of the Employers' Indemnity Corporation, positively established that company as second to no other in all paramount as well as minor matters. It has among state insurance departments, as well as with its customers, a financial standing and a reputation for fair dealing and efficient handling, that makes impossible any doubt of its ability or willingness to perform its functions satisfactorily.

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Your Profit!

to Pay the Increased Dues — Here is the Promised Reward

This is the same company that is so successfully serving the National Electrical Contractors' Association members, and hundreds of utility companies, with liability and automobile insurance.

Its statement bears out the decision of the contractors' association and The Jovian Order that it is well fortified to now and forever take care of all its obligations. It has **a larger proportionate surplus** for the protection of policy holders than any of the large accident insurance companies.

THE HIGH POINTS SPOT-LIGHTED

If you do not carry Accident or Health Insurance you are neglecting to provide yourself with what has long ago been established as an essential to well-ordered personal affairs.

The Jovian policies afford you the opportunity of securing a necessity at approximately half price, as a direct dividend on your Jovian membership.

The Jovian Order is not trying to **sell** you something; it is striving to render you a valuable service.

(2) If you believe that you are fully covered by nine-dollar policies of the so-called "Commercial" or "Traveling Men's" associations, we advise you to thoroughly investigate what you have bought.

The policies of nearly all, if not all, such companies include a number of exemptions and exceptions. They are not, in our opinion, the full coverage you should have, and under them you are liable for additional assessment. (Read their by-laws. That is where the exemptions are noted).

An article is not a bargain if it does not fulfill the duty for which it is purchased.

(3) The Accident and Health Policies issued by the foremost companies as a rule, provide splendid, full coverage,—but because of the tax imposed upon them by agents' commissions, large overhead and office detail, can not be sold to you at a price approximating the Jovian policies.

(4) Some policies provide for an accumulative value, applying, however, only to death and dismemberment. The maximum increase is fifty per cent, and it is necessary to carry the policy from five to ten years to earn such maximum.

If you have a policy upon which such increase has matured you will find that even with such increase the Jovian policy is a greater value for less money.

(5) If you have a combination Health and Accident policy, the Jovian policies can be applied to take its place at a very considerable saving to you.

(6) The fact that you may be carrying all the Accident and Health Insurance you reasonably should is certainly no bar to your benefiting by this Jovian proposition.

Make arrangements now with the Jovian Central Office to change to the Jovian policies when your others expire, and save approximately half what they are costing you.

THE POLICIES

Space here does not permit a complete schedule of all the benefits provided by these policies. Investigation will prove our assertion that they are substantially the same as any policies to be purchased elsewhere at approximately twice their cost.

The general provisions are exceedingly liberal. For example, they create a Jovian Board to hear any case of possible dispute.

The policies are written and lithographed especially for The Jovian Order (showing the Jovian emblems) and are purchasable only by Jovians in good standing.

These policies must not be confused with those issued by assessment companies and associations. Those policies carry many exemptions and limitations of certain classes of accidents, and the insured is liable for assessment in addition to the premium.

There are no exemptions in the Jovian policies. You are fully covered regardless of the character of the accident or the circumstances surrounding it. There are no additional assessments or charges possible.

The annual premium of either the Accident or the Health policy is payable in two or four installments if desired.

Due to lack of space the information given here is brief and incomplete. We have for free distribution to interested members an attractive booklet covering in a condensed but thorough manner the entire proposition. If you have the prepaid card inclosed in last month's Jovian, use it to secure the booklet; if not, use the card herewith—it requires a stamp.

More Than One Thousand Inquiries To Date—Fill Out Your Card Now!

THE JOVIAN ORDER

SYNDICATE TRUST BUILDING ST. LOUIS

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MAY REJUVENATIONS

LAKE CHARLES, LA.

FIRST TRIBUNE Henry F. Cameron, Po. 2556, and his loyal assistants of the municipality of Lake Charles, held a Rejuvenation on the evening of May 23. As it was the first affair of the kind ever held in that city, it attracted a great deal of attention and attained a great deal of publicity for the local membership.

There were two candidates to initiate; the modified form of initiation was used.

Louis A. Swann, Po. 2730, assumed the role of Jupiter, First Tribune Cameron that of Mercury and J. A. Landry, Po. 127, that of Mars.

Among the visitors present was Charles R. Humerick, Po. 7778, of Long Beach, Cal.

The candidates initiated are Arthur E. Marmaduke, contractor, and L. E. Stanley. Both are prominently identified with the local electrical industry.

* * * *

KANSAS CITY

THERE were about sixty-five members of the Order present to participate in the Rejuvenation held at the Elks' Club, Kansas City, on the evening of May 7. First Tribune J. F. Bratney, Po. 17779, had four candidates rounded up for the affair.

After the Rejuvenation a smoker was held in the rathskeller of the club. A cold lunch was served and was followed by a number of enjoyable entertainment features.

A number of the members added to the pleasure of the occasion by making humorous addresses and telling comic stories.

The affair proved to be an enjoyable one.

The following Degree Team administered the ritualistic ceremony: Jupiter, P. Lloyd Lewis, Po. 6018V; Neptune, H. C. Evans, Po. 18603; Pluto, C. A. Spaulding, Po. 7324; Vulcan, G. C. Kahl, Po. 6488; Mercury, F. A. Graham, Po. 16564; Hercules, H. B. Lewis, Po. 18122; Mars, L. G. Schumacher, Po. 15565; Apollo E. W. Rauschkolb, Po. 15562, and Avrenim, R. H. Cowdrey, Po. 19146.

* * * *

MUSKOGEE, OKLA.

THAT L. A. White, Po. 14275, and other members of the Order at Muskogee, have their hats in the ring for Jovian activity was in evidence at the splendid Rejuvenation and Joviation held May 8, at the Hotel Severs in that city.

There were twenty candidates seeking the great light that glows down from the palace of Jupiter on Mount Olympus, included among whom were such sturdy knights of the electrical industry as J. F. Owens, general manager, Muskogee Gas & Electric Company, and O. H. Weadle, general manager, Shawnee-Tecumee Traction Company.

At the Joviation addresses were delivered by H. H. White, city engineer, of Muskogee, and Geo. W. Fry, Po. 19810, general manager, Peoples Service Company.

First Tribune L. A. White, Po. 14275, presided as toastmaster.

According to reports, Eugene Stephens, Po. 6258, is due much credit for his activity in making the affair a success.

The modified form of Rejuvenation was used.

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OKLAHOMA CITY

OKLAHOMA CITY Jovians held a Rejuvenation at K. C. Hall in that city on the afternoon of May 12. There were two candidates to be initiated. First Tribune Frank J. Meyer, Po. 1484, was in charge of the arrangements, and thirty-eight members of the Order were present to aid in the ceremony.

As the Rejuvenation was held in connection with the meeting of the Oklahoma Street Railway Gas & Electric Light Company, there was no Joviation.

Among the prominent guests present was P. Lloyd Lewis, Po. 6018V, and A. D. Barber, Po. 1850V, of Kansas City.

The following Degree Team officiated: Jupiter, P. Lloyd Lewis, Po. 6018V; Neptune, A. D. Barber, Po. 1850V; Pluto, David E. Nims, Po. 3844; Vulcan, C. D. Russell, Po. 18855; Mercury, R. D. Sheldon, Po. 18856; Hercules, H. E. Musson, Po. 7899; Mars, J. A. Wiseman, Po. 16776; Apollo, Chas. McCallum, Po. 3394; Avrenim, J. W. Gerard, Po. 16562; Imps, Robert J. Baetje, Po. 6855, and W. T. Christy, Po. 19425.

* * * *

LIMA, OHIO

FOURTEEN candidates were Rejuvenated at Lima, Ohio, on the evening of May 15. First Tribune V. H. Effinger, Po. 15900, and his able co-workers planned and executed the offensive movement in a gallant manner. Closing in on the German Club from all sides they took the first, second and third line trenches, and after administering a crushing defeat to all resisting factions they camped upon the captured territory and celebrated the event.

Prominent among the candidates initiated were H. W. Brunell, Delphos, Ohio, H. O. Handwerk, Van Wert, Ohio, and Wm. S. Thompson, Leipsic, Ohio.

JOVIANS LOOK!

THE Jovian Constitution provides that a ballot be published here on which each Jovian may indicate his preference as to any individual for any elective office. The ballots are to be handed to the Nominating Committee for their information and guidance. Fill it out and mail to

THE JOVIAN ORDER

SYNDICATE TRUST BLDG. ST. LOUIS

THE JOVIAN ORDER

SYNDICATE TRUST BLDG.,

ST. LOUIS

My preference for (state name of office)

---

for the next administration is.....

.....Po.....

(Sign here)

.....Po.....

City..... State.....

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Among the notable guests who volunteered for the drive were Frank C. Polling, Po. 15317, First Tribune, Mansfield; J. C. Doering, Po. 14540, Cleveland; S. J. Folkman, Po. 4498, Cleveland; E. L. Van Winkle, Po. 1683, Cincinnati; A. W. Janowitz, Po. 16170, and C. S. Kuntz, Po. 4346, Columbus. All of the visitors made short addresses.

Fred W. Godfrey, Po. 271, presided as toastmaster at the Joviation.

According to reports, Wm. P. Hurd, Po. 9798, deserves much credit for his activity in making the affair a success.

The following Degree Team conferred the initiation: J. J. McCabe, Po. 18448, Jupiter; C. L. Rohebaugh, Po. 18450, Neptune; Ray Kaufman, Po. 4822, Pluto; J. M. Demay, Po. 18444, Vulcan; V. H. Effinger, Po. 15900, Mercury; R. G. Sloate, Po. 18452, Hercules; F. C. Poling, Po. 5317, Mars; Fred W. Godfrey, Po. 271, Apollo; Chas. S. Kuntz, Po. 4346, Avrenim, and W. B. Hurd, Po. 9798; E. D. Wentworth, Po. 6966, and D. V. Leatherman, Po. 15904, Imps.

* * * *

WICHITA, KAN.

WICHITA Jovians to the number of sixty participated in the Rejuvenation and Joviation held at A. O. U. W. Hall in that city on the evening of May 26.

In addition to the above there was a theater party provided for the ladies of the Jovian family at the Palace Theater during the Rejuvenation.

First Tribune J. L. Harvey, Po. 6546, was in charge of the initiation ceremonies, and Charles R. Lewis, Po. 15815, presided at the banquet.

Among the prominent candidates initiated were S. A. Long and Clark E. Brown of the Delco Light Company.

P. Lloyd Lewis, Po. 6018V, president of the Kansas City League, was among the guests, as the official representative of the Jovian Central Office.

The speakers at the Joviation were Charles R. Lewis, Po. 15815, S. A. Long, P. Lloyd Lewis, Po. 6018V, and J. L. Harvey, Po. 6546.

Jovian workers, who from reports deserve special mention for their activities in making the affair a success are L. W. Ghent, Po. 18713, L. J. Blevins, Po. 15804, and A. W. Crary, Po. 19533.

The following Degree Team conferred the initiation: Jupiter, P. Lloyd Lewis, Po. 6018V; Neptune, J. D. Todd, Po. 7968. Pluto, Chas. A. Stanley, Po. 9690; Vulcan, J. L. Harvey, Po; 6546; Mercury, Homer S. Fox, Po. 17868; Hercules, A. W. Carry, Po. 19533; Mars, L. E. Staley, Po. 17873; Apollo, Charles R. Lewis, Po. 15815.

* * * *

OBITUARY

JAY H. ROSS, Po. 7321, died at his home in Kansas City, Mo., May 31. Jovian Ross was twenty-seven years old and at the time of his death was secretary-treasurer of the American Electrical Equipment Company, with which he had been connected for five years. He was married. His wife and one child survive him. The JOVIAN extends to them the sympathy and condolences of the Order.

* * * *

ARTHUR GUNN, Po. 7001, president of the Wenatchee Valley Gas & Electric Company, Wenatchee, Wash., met his death May 24 when his automobile overturned and he was pinned beneath it. Jovian Gunn had been a resident of Wenatchee since 1892, and had been active in the business affairs of the city since that time. He was the organizer of the Columbia Valley Bank and the Pioneer Ditch Company. Later he became president of the Central Washington Gas Company. During the years of 1905-07 he was representative for the counties of Chelan and Kittitas in the state legislature. He leaves a wife and six children to whom The JOVIAN extends the sympathy and the condolences of the fraternity.

A. J. HITZKER, Po. 3225, died June 11 at the home of his parents at Winona, Minn., after a lingering illness. He was a graduate of the University of Minnesota, Class of '09, and since that year had been connected with the National Lamp Works, Cleveland, Ohio. He is survived by his parents, a sister and a brother, to whom The JOVIAN extends the sympathy and condolences of the Order.

* * * *

CHARLES SIMPSON SHIPMAN, Po. 4745, fromerly general manager of the Shipman Electrical Company, Ltd., Winnipeg, Man., lost his life during the battle of Vimy Ridge in France. Jovian Shipman was commissioned a major and died leading his men in the fight. He was an esteemed member of the Winnipeg League and of the fraternity, and his loss is felt deeply by his many friends and acquaintances. On behalf of the fraternity, The JOVIAN extends sincere sympathy and condolences to his relatives and friends and its highest appreciation for his bravery and noble sacrifice.

* * * *

ROBBINS & MYERS EMPLOYEES DONATE PICNIC MONEY TO RED CROSS

IN AN editorial in the official magazine of the company, The R. & M. Co-operator, the officials of The Robbins & Myers Company, of Springfield, Ohio, asked their employees if they would prefer a parade and picnic this year as usual, or that the money appropriated for the annual affair be donated to the Red Cross.

The question was put up to the employees in a unique form, showing how the money would be spent if they chose a picnic and what it would buy if donated to the Red Cross.

The employees decided by a vote of ten to one in favor of giving the fund to the Red Cross.

It was estimated that the amount to be spent on the picnic would buy 500 barrels of flour or two completely equipped ambulance units.

Sticker—two inches in diameter, printed in red on white—being distributed free of charge by The Jovian Order on request. Write, stating the quantity you will use, to

THE JOVIAN ORDER

Syndicate Trust Building, St. Louis and put them on your letter heads and envelopes.

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"ROSIE"

Words and deeds of Jean Baptiste Trudeau, fully and faithfully reported for "THE JOVIAN" by George C. Rough, Po. No. 512-V, Past Twelfth Hercules.

POOR ROSIE * * * * She be de wife of ol' Napoleon Gariepy, was de BOSS boulanger of de 'ole Counte, mak' de mos' bes' bread you never see. Oh—Mon Dieu—dat "crusty" an' du pan dore—Mak' you's mout' water jus' for smell dat pleasan' smell. All de small garcon, an' de ol' peep too, get de hongree jus' pass near hees plas' on de Main Street of de village.

No won'er dem Canadien boy fight lak' HELL w'en dey know dat Ol' Bonhomme Napoleon is back of de line wit' de bread.

Yas—Sure 'nuff—soon as de call com'—Napoleon say to Rosie right off—"Good Bye—Am goin' to de ditch." An' he sail for La Belle France de ver' nex' wick.

W'en he get dere, Papa Joffre say "Comment ca va Napoleon—Am ver' glad for see you here. You wan' fight Eh?—Ba Non—You too good man for de front (hees only 62—young man yet). It's bes' t'ing you stay behin' an' mak' de bread for ma Poillus." So Napoleon say "Correc' Papa—dat's not so hard on de rheumatiz."

Poor Rosie * * * * Nex'—Jean, de ol'es' boy, say "Mamma," (ver' bashful) "perhaps"—"Don' you t'ink"—"Mebbe"—"Wall I'm join for over de sea." An' Rosie say, ver' quiet, "Alright Mon Fils—go ahead". She don' cry—she don' smile—don' get excite. She jus' get ready de boy—pray leetle bit—say "Bon Voyage" an' den work mor' hard on de bakery.

Poor Rosie * * * * Francois, de secon' boy (don' look ver' strong) by'n by tell hees modder—"Mamma—Papa, hees gon', an' Jean, hees gon'—don' you t'ink you get som' nudder help on de shop an' lef' me go tak' care Papa—see he don' get in no trouble?" "Wall," Rosie say, "Am gettin' ol'—it hard do all dat work on de bakery by mese'f. Anyhow—mebbe—Papa Joffre need you over dere." So Francois, he go.

Poor Rosie * * * * De jood of de familee, leetle Archoor, was educate on Montreal—t'ree year at de school of de Christian Brother—alway de bes' on de class. Got good job too. Was only 19 las' fall. Sen' leetle monee ev'ry mont'. He is sure de favorite wit' de modder—don' say nuttings—jus' tak' de course, an' was get w'at you call de commission—com' home all dress up lak' de officer.

Rosie don' know heem right off, but w'en he say, "Mamma," Rosie jus' sit down an' cry lak' de babee. "Oh—Mon enfant—I can' let you go too—you all I hav' lef'." Archoor, he cry leetle bit too, an' put hees arm roun' Poor Rosie an' say—"Mamma—I mus' go." "Don' worry—we all com' back by'n by—I mus' go wit' de res"—"Canada she need all"—We GOT WIN DAT GAME."

Rosie don' cry no more, at leas' nobody see dat—an' nobody see her laugh lak' she always do. She jus' work more hard on de bakery, an' everybody on de 'ole village is wonder.

POOR ROSIE * * * * .

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SAINT LOUIS

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

His Unkla Sam

By W. R. J.

MY LEETLA boy he puzzla me,
I can not understand
Why he ees alla time so queek
to leesen to da band;
Da museek eet ees alla right
but not so nice to me,
As that they play so vera fine
back home in Eetaly.

But evra time eet start to play
dees leetla boy of mine
He right awa' begins to sing
an' tink eet vera fine.
An' when he hear some kinda tune,
no dif'rence where he's at,
I'm betcha he will stand right up
an' taka off hees hat.

One time I sa' to heem: "What ees
you taka eet off for?"
He sa' to me, "For Unkla Sam,
eet ees da Spangla Star."
An' when I sa', "I have no kin
da name of sucha man,"
He answer queek, "He's kin to me,
I am American."

* * * *

Nature Makes a Good Alibi But Is Not a Safe Subject to Criticise

OMAR KHAYYAM wrote in his book a little protest against the way Old Mother Nature cuts up. He expressed a wish to conspire against the old dame, make carpet-rags of her tapestry and then weave them into a rug or a curtain to spread over the places that look bare or hang in front of the unsymmetrical views of the landscape.

A lot of us feel that way about it sometimes. We don't believe the old lady knew what she was about when she wove some of the netting we get tangled up in. We believe we could improve upon it wonderfully. There are too many drop-stitches in the scheme of things that apparently was only a bad job of weaving. We trip on them frequently and each time we do we jump on Nature for getting us in bad.

The poor old lady comes in for a lot of criticism on that score. Uncle Cornfodder sets her up as an alibi for poor crops; the concrete contractor refers you to her for an explanation as to why the sidewalk cracked; our eminent medical profession proclaims her as the originator of most of our ailments and the weather man—well the weather man would be in an awful predicament is he couldn't assail her lack of consistency.

In spite of all of these conspiracies to defame her reputation, Old Mother Nature keeps jogging along on the even tenor of her way. She pulls the strings of the watering-pot when she thinks the flowers need sprinkling; turns on the heat with a regularity that would make an apartment janitor's batting average look like double O one; refrigerates to keep the products from spoiling after they are canned and sterilizes the atmosphere by an automatic wireless electric process that keeps the forces of bacteria below war strength.

Critics of Nature are all pretty much like the gentleman who said Nature ought to be ashamed of herself for hanging a great big thing like a watermelon on a little vine and pinning a little acorn on a big strong oak tree. Just prior to his discourse on the subject a colored gentleman had taken refuge in the tree being used for illustration and becoming agitated dropped the watermelon he was holding on the Nature revisor's head. This concluding argument demonstrated the wisdom of Nature in keeping the larger variety of fruit on the ground.

The lack of a little knowledge is usually the foundation for all the criticism directed against Old Mother Nature. We rant and rave about her short-comings until she beans us with something a la Isaac Newton, then it dawns upon us that she is performing a few tasks we didn't know had to be done. Afterwards we sit down and watch the show without trying to demonstrate how little we know about the performance.

* * * *

A Modern Goliath

By W. R. J.

THE NATIONS have spoken against you,
and the ruthless fight you wage;
For one by one they have call'd: "To Arms!"
as your actions fired their rage.
The rights of no nation are sacred;
you cry to them all, "Make way!
No vessel shall sail on the seas again
until I say it may."
You shout that you fight for freedom,
for liberty and right,
While you trample a helpless nation
and gloat at its wretched plight.
You boast of your wonderful culture
as you wield a slayer's rod,
And your hands are wet with children's blood
as you hold them up to God.
Oh, your traitorous act of boasting
of a friendship for a land,
As you plot against its people's peace
and to strike it underhand!
By what do you gauge your honor?
By the way your words will sound,
To suavely veil some treacherous act
to which your soul is bound.
You bow to an idol of science,
whose image you claim is might;
A doctrine you give to your people
that strength is the law of right.
You worship the skill of the workers
you drive with an iron hand,
And you keep the truth from their reading
that they may not understand.
Ah, you dream'd that your idol would lead you
as the Philistines dream'd of old,
When they followed their giant to battle,
for your god has made you bold;
But the nations of earth have spoken,
and their legions in wave upon wave
Will shatter your dream and your idol
whose teaching has made you its slave.

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DETROIT, MICH.
May 24, 1917.

Ell. C. Bennett, Lurcury,
Syndicate Trust Bldg.,
St. Louis, Mo.

Dear Mr. Bennett:

Your letter of May 17th received and read with considerable interest. The arrangement made for health and accident insurance with the Utilities Indemnity Exchange of St. Louis, should be attractive and beneficial to the members.

The National Electrical Contractors Association, through its Insurance Committee, entered into an arrangement for Liability Insurance with this Exchange in 1915, and the results have been very satisfactory.

As a member of the N.E.C.A., my Company has carried its Liability Insurance with this Exchange since 1915, and our experience has been entirely satisfactory in every way. We find the cost is less than formerly, and the manner in which losses are adjusted is more satisfactory.

We hold the Utilities Indemnity Exchange in the highest esteem, and consider their integrity beyond question. Their policy is liberal but sound.

Sincerely yours,

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L. McCleary

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PRACTICAL LESSONS IN ELECTRICITY

LESSON TWENTY-SEVEN

THE EFFECTS OF RESISTANCE AND OF INDUCTANCE IN ALTERNATING-CURRENT CIRCUITS

By TERRELL CROFT

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THE EFFECT of resistance in alternating-current circuits which contain resistance only, that is, which contain no inductance or permittance (capacitance) is the same as its effect in direct-current circuits. Resistance in alternating-current circuits limits the current therein and causes a loss or

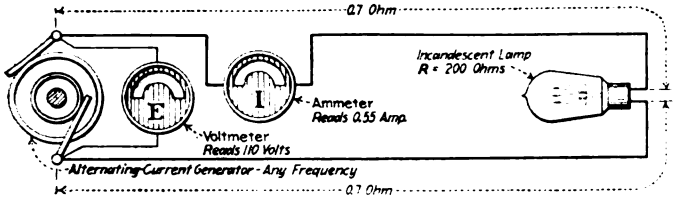

Fig. 1—Illustrating the Effect of Resistance in an Alternating-Current Circuit

drop in voltage, just as it does in direct-current circuits. With a given alternating e.m.f. impressed on a circuit, the current in it will vary inversely as its resistance. It follows that Ohm's law is, without qualification, true for alternating-current circuits containing resistance only. Thus:—

$$(1) \qquad Ie = \frac{Ee}{R} \qquad (amperes)$$

$$(2) \text{ and } \qquad Ee = Ie \times R \quad \text{or} \quad R = \frac{Ee}{Ie}$$

Wherein.—Ie = effective current in the circuit, in amp. Ee = the effective e.m.f. or voltage impressed across the circuit, in volts. R = the resistance of the circuit in ohms.

EXAMPLE.—What current will flow in the alternating-current circuit of Fig. 1 which contains resistance only? The impressed pressure (effective voltage) indicated by the voltmeter is 110 volts, the resistance of each load is 0.70 ohm and the resistance of the incandescent lamp is 200 ohms. The frequency of the current may be anything. SOLUTION.—Substitute in the Ohm's law formula:—

$$Ie = \frac{Ee}{R} = \frac{100}{0.7 + 0.7 + 200} = \frac{100}{201.4} = 0.55 \text{ amp.}$$

EXAMPLE.—What voltage must the alternating-current generator (it may develop any frequency) of Fig. 2—*I* develop to impel a current of 2 amp. (effective) in the circuit shown which, it is assumed, has a total resistance of 50 ohm? SOLUTION.—Substitute in equation (2) above. Thus:—$Ee = Ie \times R = 2 \times 50 = 100$ *volts*. Hence, to circulate the current of 2 amp. (effective) the generator should produce 100 volts (effective) across its terminals *A* and *B*.

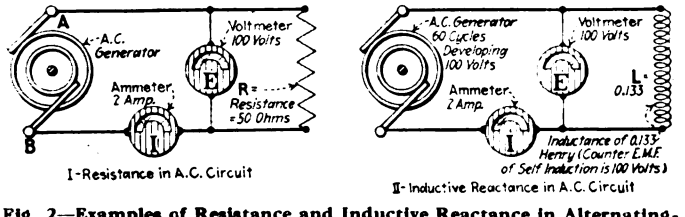

Fig. 2—Examples of Resistance and Inductive Reactance in Alternating-Current Circuits

There is a loss of power when an alternating current flows through resistance, just as there is when a direct current flows through resistance. The power loss, in watts, in any conductor, conveying either an alternating or a direct current, always equals *the square of the current in amperes (effective current in alternating-current circuits) multiplied by the resistance of the conductor in ohms.* This rule is perfectly general and applies to alternating currents of all ordinary voltages and frequencies even if they contain inductance or permittance (capacitance). (There is no power loss in inductance or permittance.) The electrical power thus lost reappears as heat and raises the temperature of the conductor. Expressed as a formula:

$$(3) \qquad P = I^2e \times R$$

$$(4) \text{ or } \qquad Ie = \sqrt{\frac{P}{R}}$$

$$(5) \qquad R = \frac{P}{I^2e}$$

Wherein.—P = power lost in the conductor, in watts. Ie = effective current, in amperes, in the conductor. R = resistance of the conductor, in ohms. Note that the above formulas are identical with those for direct current, except that in this alternating-current formula, the current Ie = is the effective current.

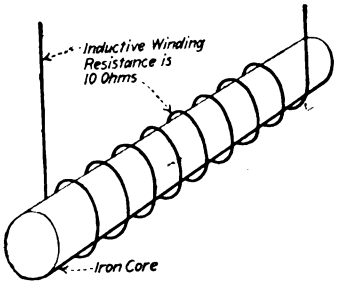

Fig. 3—Illustrating Power Loss in an Inductive Winding

EXAMPLE.—What is the power loss in the incandescent lamp in Fig. 1? SOLUTION.—The lamp, as shown in the picture, has a resistance of 200 ohms and the current through it is 0.55 amp. Then:—

$$P = I^2e \times R = (0.55 \times 0.55) \times 200 = 60.5 \text{ watts.}$$

In other words, the lamp is a 60.5 watt lamp.

EXAMPLE.—What is the power loss in the inductive winding of Fig. 3 when an alternating current of 5 amp. flows in it? The winding has a resistance of 10 ohms. SOLUTION.—

$$P = I^2e \times R = (5 \times 5) \times 10 = 250 \text{ watts.}$$

With a current of 5 amp., the power loss in the winding would be 250 watts regardless of the frequency and regardless of the fact that it is an "inductive" winding.

In alternating-current circuits, containing resistance only, the current is in phase with the impressed voltage as shown in Fig. 4—*III*. That is, in such circuits, the current attains its crest or maximum values at the same instants as those at which

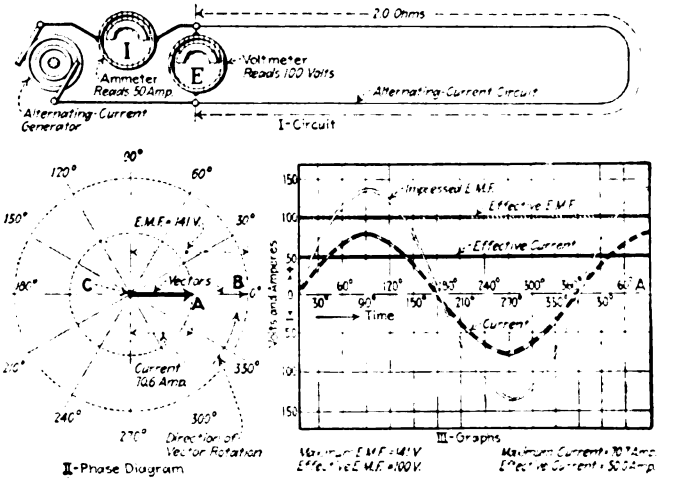

Fig. 4—Example of an Alternating-Current Circuit Containing Resistance (2 Ohms) Only

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the impressed e.m.f. (which circulates the current in the circuit) reaches its crest or maximum values.

EXAMPLE.—Fig. 4—*I* shows the diagram of an alternating-current circuit containing resistance only. The alternating e.m.f. (effective) impressed on the circuit is, as indicated by the voltmeter, 100 volts. The resistance of the circuit is 2 ohms. Then, since the circuit contains resistance only, by Ohm's law the effective alternating current in the circuit is:—*Ie = Ee ÷ R = 100 ÷ 2 = 50 amp.* The phase diagram given at *II* shows the phase relation of this e.m.f. and the current which it propagates. They are in phase with each other.

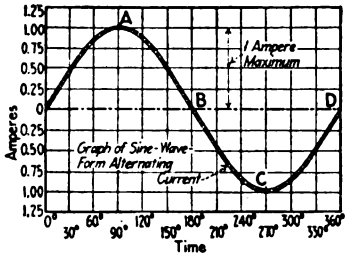

Fig. 5—Illustrating "Rate of Change" of an Alternating Current

The light line *CB*, the impressed e.m.f. vector, is made 141 units long to represent a maximum of 141 volts, which is the maximum corresponding to an effective e.m.f. of 100 volts. The heavy black line *CA* is made 70.6 units long to represent 70.6 amp., which is the maximum current corresponding to an effective current of 50 amp. At *III* the graphs of the e.m.f. and current are plotted and they indicate that the e.m.f. and current are in phase.

The effects of inductance in alternating-current circuits are, in general, much more noticeable than those which it produces in direct-current circuits. Why this is the case will be explained. It can be shown that whenever the current, in a circuit having inductance, changes in intensity, a *counter e.m.f. of self-induction* is induced in the circuit. With direct currents, the effects of inductance are most noticeable:—(*a*) just after a circuit is closed and a current is forced to circulate in it, (*b*) when a circuit having a current flowing in it is opened or (*c*) when, for any other reason, there is a change in the intensity of the current in the circuit. Inductive effects are then due to changes in *current* intensity.

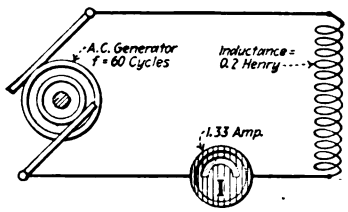

Fig. 6—Inductive Winding in an Alternating-Current Circuit

Now, alternating currents reverse in direction at regular intervals and are constantly changing in intensity. See Fig. 5. Therefore, since in these circuits the current is constantly changing in intensity, the result is that a counter e.m.f. of self-induction is, if they contain inductance being generated constantly—all the time—in them where current is flowing. The counter e.m.f. of self-induction is always in such a direction as to oppose any change in the intensity of the then existing current. This counter e.m.f. of self-induction varies in intensity just as does any alternating e.m.f. But it is not in phase with the e.m.f. or current which produces it, as will be shown. Its variation with the time follows a sine wave form—if the current which induces it has a sine wave form.

In order to predetermine the intensity of the current—the number of amperes—which will flow in an actual alternating-current circuit containing inductance it is first necessary to either directly or indirectly compute the value of the counter e.m.f. of self-induction of the circuit and then substract it from the impressed e.m.f. which it opposes. The difference, the e.m.f. which really circulates the current in the circuit, may be called the *active or energy e.m.f.* In practice this subtraction is most readily effected by introducing a quantity which is called *reactance.* Note that in ideal circuits which contain only inductance or permittance, or both, but which contain no resistance, there is no active or energy e.m.f. But an applied alternating e.m.f. would, nevertheless, propagate an alternating current in such a circuit—if such a circuit could exist. However, it is obvious that there cannot be an electric circuit which does not have some resistance.

The counter e.m.f. of self-induction always lags 90 deg. behind the current, that is, the effect of inductance is 90 deg. behind or at right angles to the current. This is stated here merely as a fact; why it is true will be shown later.

To compute the counter e.m.f. of self-induction in an alternating-current circuit—or in any circuit for that matter—the inductance of the circuit, *L*, is multiplied by the *rate of change* of current in the circuit. If the inductance, *L*, is expressed in henrys and it be multiplied by the *average rate of change* in current, the change of current per second in the circuit, the result will be the *average counter e.m.f.*, in volts, induced in the circuit during that second; this follows from the definition of the henry.

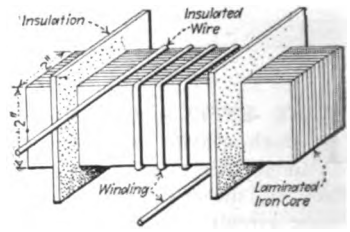

Fig. 7—Laminated Iron Core with Insulated-Wire Winding

Now an alternating current is continually changing in intensity; hence, it is continually—if there be inductance in the circuit, inducing a counter e.m.f. However, in dealing with alternating-current circuits, it is not the *average* counter e.m.f. which is of interest but it is the *effective* counter e.m.f. It can be shown (see proof in the following note) that the *effective rate of change of a sine-wave-form alternating-current*—that is, the rate of change in the effective current per second = $6.28 \times f \times I$.

Hence:—

(6) $$Ec = 6.28 \times f \times L \times I \qquad (volts)$$

(7) and $$f = \frac{Ec}{6.28 \times L \times I} \qquad (cycles\ per\ second)$$

(8) and $$L = \frac{Ec}{6.28 \times f \times I} \qquad (henry)$$

(9) and $$I = \frac{Ec}{6.28 \times f \times L} \qquad (amperes)$$

Wherein.—*Ec* = the counter e.m.f. (effective) of self-induction, in volts. *f* = frequency of the current in cycles per second. *L* = inductance of the circuit or conductor, in henrys. *I* = current (effective) in the circuit or conductor, in amperes.

The symbol π (a Greek letter pronounced "pie") has been universally adopted to stand for the number "3.1416." Now, $2 \times 3.1416 = 6.28$. Hence, the above formula may also be written:—$Ec = 2 \times \pi \times f \times L \times I$, which is the form very frequently adopted in textbooks.

EXAMPLE.—What counter e.m.f. is generated in the coil of Fig. 6, which has an inductance of 0.2 henry, when an effective alternating current of 1.33 amp. flows in it, at a frequency of 60 cycles per second? SOLUTION.—Substitute in the above formula:—$Ec = 6.28 \times f \times L \times I = 6.28 \times 60 \times 0.2 \times 1.33 = 100$ *volts* (almost). This means that the generator must impress 100 volts (effective) across the terminals of the coil to circulate a current of 1.33 amp. through the coil. It also means that when

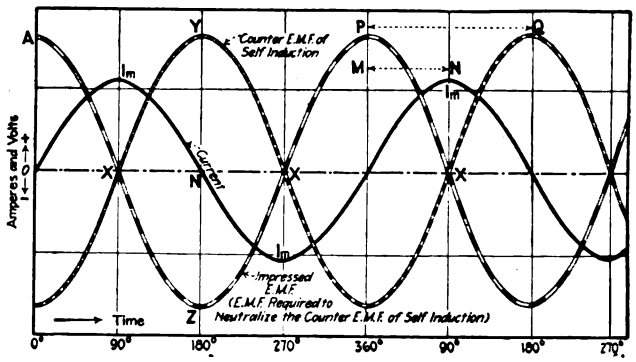

Fig. 8—Graphs of Current and Impressed and Counter e.m.fs. in an Imaginary Alternating-Current Circuit Containing Inductance Only. (Actually there cannot be a circuit which does not have some resistance)

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a current of 1.33 amp. at 60 cycles flows in the coil, the counter e.m.f. of self-induction developed in the coil is 100 volts.

NOTE.—PROOF THAT $6.28 \times f \times I$ = EFFECTIVE RATE OF CHANGE OF A SINE-WAVE-FORM ALTERNATING CURRENT. Consider the rate of change of current in an alternating-current circuit. Refer, for example, to Fig. 5, which shows the graph of a sine-wave-form alternating current having a crest or maximum value of 1 amp. Note that during 1 cycle (*OABCD*) the current:—(1) *Increases, OA, from 0 amp. to 1 amp.*, in the positive direction; (2) *Decreases, AB, from 1 amp. to 0 amp.* in the positive direction; (3) *Increases, BC, from 0 amp. to 1 amp.*, in the negative direction; and (4) *Decreases, CD, from 1 amp. to 0 amp.*, in the negative direction. Note then that the alternating current graphed in Fig. 5 changes *four times per cycle from 0 amp. to 1 amp.*

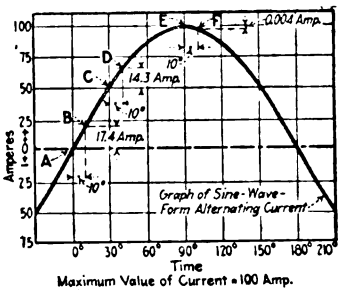

Fig. 9—Showing How the Rate of Change of Current Varies at Different Times in a Cycle

It follows that any alternating current changes four times per cycle between zero intensity to maximum intensity. Let the symbol *Im* stand for maximum current. Then the change of current per cycle = $4 \times Im$.

Now, *average rate of change of current = change in amp. ÷ seconds*. With an alternating current:—frequency or f = cycles per second. Hence, the time, in seconds, required for the completion of 1 cycle = $1 \div f = \frac{1}{f}$ (For example, with a 60-cycle current 1-60 sec. is required for the completion of 1 cycle.) The time, in seconds, required for each of the four changes from zero intensity to maximum intensity in a cycle is, obviously, one-fourth the time required for the completion of an entire cycle. Therefore, the time required for one of the changes is: $\frac{1}{4} \times \frac{1}{f} = \frac{1}{4 \times f}$ *sec.* That is, the current changes from 0 amp. to *Im* amp. in $\frac{1}{4 \times f}$ *sec.*

The average rate of change of current as defined in the preceding paragraph—the change of current per second—must be:—*the change in current in amp. divided by the time in sec. elapsing while the change transpires;* that is:—

(10) $Av.\ rate\ of\ change\ of\ current = Im \div (\frac{1}{4 \times f}) = 4 \times f \times Im$

Now, in practical work we deal with effective currents rather than with maximum currents, and hence *Im* should be converted into its equivalent effective value. It can be shown that:—$Im = 1.41 \times Ie$, or to be more exact:—

(11) $Im = 1.4142 \times Ie$

Then substituting (11) in (10):—

(12) $Av.\ rate\ of\ change\ of\ current = 4 \times f \times (1.4142 \times Ie)$

(13) or $Av.\ rate\ of\ change\ of\ current = 5.6568 \times f \times Ie$

If then this expression:—$5.6568 \times f \times Ie$, which represents the *average* rate of change of current per second, were multiplied by the inductance, *L*, in henrys, of an alternating-current circuit the product would be the *average* counter e.m.f., in volts, induced in the circuit. But we are usually interested in and deal with *effective* counter e.m.f.s, not average e.m.f.s. Hence, the expression of (13) will now be so modified that it will give the *effective* rate of change of current. It can be shown that:—*Average Values = 0.90 × Effective Values*. Hence:—

(14) $Av.\ rate\ of\ change\ of\ current = 0.90 \times effective\ rate\ of\ change\ of\ current.$

Now substituting the expression of (14) in (13):—

(15) $0.90 \times effective\ rate\ of\ change\ of\ current = 5.6568 \times f \times Ie$

Then simplifying:—

(16) $Effective\ rate\ of\ change\ of\ current = \frac{5.6568 \times f \times Ie}{0.90}$

(17) $Effective\ rate\ of\ change\ of\ current = 6.28 \times f \times Ie$

NOTE.—Power is not expended in overcoming a counter e.m.f. of self-induction. If there is resistance in the circuit, and there always is some, though in many cases very little, power is expended in forcing the current to circulate through the resistance.

The method of computing the counter e.m.f. of self-induction of any coil in an alternating-current circuit follows from the principles just outlined. It can be shown that the inductance of any coil, $L = (\Phi a \times N) \div 10^8$, wherein Φa = the flux produced by the coil per ampere of current flowing in it and N = number of turns in the coil. Then if this quantity, which represents the inductance of the coil, be multiplied by the *average rate of change* of current — the change in current per sec. — the product will be the average counter e.m.f. of self-induction induced. It has been shown (equation 10) that the *average rate of change* of a sine-wave-form alternating current $= 4 \times f \times Im$. Hence, if *Eca* be taken to represent the average counter e.m.f. induced by the coil and performing the multiplication just suggested:—

(18) $Eca = 4 \times f \times Im \times (\frac{\Phi a \times N}{10^8}) = \frac{4 \times f \times Im \times \Phi a \times N}{100{,}000{,}000}$

But, obviously, *Maximum Amperes × Flux Per Ampere = Maximum Flux*, that is:

(19) $Im \times \Phi a = \Phi m$

Then substituting Φm for "$Im \times \Phi a$" in equation (18):—

(20) $Eca = \frac{4 \times f \times \Phi m \times N}{100{,}000{,}000}$

But, *Average Values = 0.90 × Effective Value*, hence:—

(21) $Eca = 0.90 \times Ece$

Then substituting (21) in (20):—

(22) $0.90 \times Ece = \frac{4 \times f \times \Phi m \times N}{100{,}000{,}000}$

(23) $Ece = \frac{4 \times f \times \Phi m \times N}{0.90 \times 100{,}000{,}000}$

(24) $Ece = \frac{4.44 \times f \times \Phi m \times N}{100{,}000{,}000}$

Wherein.—*Ece* = volts, effective, counter e.m.f. induced in any coil by a sine-wave-form alternating current. f = frequency of the circuit in cycles per second. Φm = maximum total flux or lines of force produced by the coil. N = number of turns in the coil.

EXAMPLE.—A certain coil has 500 turns. With a 60-cycle alternating current of such value flowing through it that a flux of 300,000,000 lines maximum is developed, what is the counter e.m.f. then induced in the coil? SOLUTION.—Substitute in the above formula:—

$$Ece = \frac{4.44 \times f \times \Phi m \times N}{100{,}000{,}000} = \frac{4.44 \times 6 \times 3 \times 5}{10} = 39.9\ volts$$

Hence, the induced counter e.m.f. is 39.9 volts (effective).

The above equation is very important, that is equation (24), inasmuch as it is utilized repeatedly in the design of alternating-current generators, transformers and motors.

To compute the counter e.m.f. of a coil in an alternating-current circuit on the basis of the area of the core of the coil and the flux density, it is merely necessary to modify equation (24) accordingly, as will be shown. In an alternating-current magnetic circuit it is, obviously, the flux density at the instants when the current is a maximum, that is *Bm*, which should determine the area of the magnetic circuit. If the magnetic circuit has sufficient area to effectively carry the flux due to the maximum instantaneous current it will, plainly, carry the flux due to currents less than the maximum. Now it can be shown that:—$\Phi = A \times B$,

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hence $\Phi m = A \times Bm$. Then, substituting this value for Φm in equation (24), the following working formula is obtained:—

$$(25) \qquad Ece = \frac{4.44 \times f \times A \times Bm \times N}{100{,}000{,}000} \qquad (volts)$$

Wherein all symbols have the same meanings as under equation (24) except that:—A = cross sectional area of core, in sq. in. = area, where an iron core is used, of cross section of iron in the core on which the coil is wound. Bm = maximum flux density, in lines per sq. in., that is, the flux density at the instants when the current in the coil is at its maximum instantaneous values. In design, Bm is usually taken at some value well below the saturation point.

EXAMPLE.—If an iron core similar to that of Fig. 7, except having an area of $1\frac{5}{8}$ sq. in., is wound with 700 turns of wire, what will be the effective counter e.m.f. which it develops in a 40-cycle circuit, assuming that the current through it is such that Bm = 70,000 lines per sq. in.? SOLUTION.—From Formula (25):—

$$Ece = \frac{4.44 \times f \times A \times Bm \times N}{100{,}000{,}000} = \frac{4.44 \times 40 \times 1.625 \times 70{,}000 \times 700}{1{,}000{,}000} = 141 \text{ volts}$$

Therefore, the counter e.m.f. developed under the above conditions (and assuming that there is no magnetic leakage) is 141 volts.

EXAMPLE.—It is desired to wind a coil on the laminated iron core of Fig. 7 which will develop a counter e.m.f. of 100 volts when connected in multiple on a 60-cycle circuit. Permissible maximum flux density is taken as 30,000 lines per sq. in. How many turns, assuming no magnetic leakage, will be required on the coil to produce this result? SOLUTION.—Core is 2 in. × 2 in., hence area = 4 sq. in. Solving equation (25) for N:—

$$N = \frac{100{,}000{,}000 \times Ece}{4.44 \times f \times A \times Bm} = \frac{100{,}000{,}000 \times 100}{4.44 \times 60 \times 4 \times 30{,}000} = 313 \text{ turns}$$

Hence, 313 or, say 310 turns are necessary.

Phase relations of current and the counter e.m.f. due to inductance are shown in Fig. 8. The counter e.m.f. of self-induction in an alternating-current circuit is never in phase with the current which produces it. Nor is it in phase with the e.m.f. impressed on the circuit by the generator or other source. As has been previously stated, and as now will be shown, the counter e.m.f. of self-induction always lags 90 deg. behind the current. The reason of this 90-deg. lag—which represents a certain definite interval of time—is given in the following explanation.

EXPLANATION.—The intensity of an e.m.f.—or a counter e.m.f.—induced in any conductor is determined by the *rate* at which the conductor cuts or is cut by flux. The greater the rate of cutting, the greater the induced voltage. The slower the rate, the lower the induced voltage. The counter e.m.f. of self-induction in any alternating-current circuit is induced by virtue of the movement of concentric lines of force which emanate from the center of the conductor. These circular flux lines in expanding outward, as the current increases, or in contracting inward, as the current decreases (as the alternating current varies in intensity or changes in direction) cut the conductor or the turns of the coil into which the conductor may be formed.

Obviously, the speed of travel and speed of cutting of these lines is proportional to the rate of change of current. It is evident from the values shown in Fig. 9 that with an alternating current the *rate of change of current* is constantly changing. During the time an alternating current is passing through its zero value its rate of change is greatest. For example, during the 10-deg. period, AB, the current graphed in Fig. 9 has changed (increased) in intensity by 17.4 amp. During the 10-deg. period, CD, the rate of change is slower, viz., an increase of only 14.3 amp. At about the time the current is passing through its maximum value, the rate of change is very slow indeed; during the 10-deg. period, EF, the decrease shown in the illustration is only 0.004 amp.

It can be shown that there is any instant, when the current is just at its maximum value E (Fig. 9) during which the rate of change of current intensity is zero. Therefore, since the intensity of a counter e.m.f. at any instant is determined by the rate of change of current at that instant, the counter e.m.f. of self-induction induced in an alternating-current circuit will be *zero* when the *current* is passing through its maximum value. The graphs of Fig. 8 illustrate this condition. When the current is a maximum at Im, the counter e.m.f. is zero at X.

The rate of change of an alternating current is greatest when the current is passing through its zero value. Therefore, the counter e.m.f. of self-induction is a maximum when the current to which it is due is a minimum. In Fig. 8 at the instant when the current is zero, at N, the counter e.m.f. of self-induction is a maximum, at Y.

Since any induced counter e.m.f. is always in such a direction as to oppose any change in the current producing it, the curve of the counter e.m.f. must be in the relation to the curve of current that is shown in Fig. 8. At the instants when the current is increasing the counter e.m.f. is decreasing. At the instants when the current is decreasing the counter e.m.f. is increasing.

The counter e.m.f. of self-induction will lag behind the current by 90 deg., which means that the counter e.m.f. will reach its maximum intensities in each cycle a certain interval of time (represented by 90 deg.) later than the current reaches its maximum intensity.

The current in an alternating-current circuit containing only inductance and resistance always lags behind the e.m.f. impressed by the generator. The amount of lag is proportional to the amount of inductance (or *inductive reactance*) in the circuit. If there is no inductance in the circuit, then there is no lag and the current will be in phase with the impressed e.m.f. as shown in Fig. 4. In a circuit consisting wholly of inductive reactance—such a circuit is however a physical impossibility—the current would lag exactly 90 deg. behind the impressed e.m.f. as shown in Fig. 8. With varying proportions of inductive reactance and resistance, the current will lag by some amount between 90 deg. and 0 deg. behind the impressed e.m.f. With little inductance in the circuit there will be but little lag; with much inductance the lag may be almost 90 deg.

GOVERNMENT NEEDS AVIATORS

"GOVERNMENT needs aviators by thousands; is not being 'swamped' with applications."—The Official Bulletin.

It seems that an erroneous report has been circulated throughout the country that the aviation corps of the Army is being swamped with applications for enlistment. This report has had the effect of keeping a large number of young men from making application for service in that branch of the Army.

The fact of the matter is a great air fleet is planned by the government and thousands of flyers are needed.

The places to make application are as follows:

The Signal Corps, War Department, Washington, D. C.
The Mineola Flying Field, Mineola, L. I.
The Essington Flying Field, Essington, Pa.
Fort Sam Houston, San Antonio, Texas.
North Brothers Island, San Diego, Cal.
Signal Officer, Central Department, Chicago, Ill.
Fort Omaha, Omaha, Neb.

* * * *

J. M. BATEMAN NEW PRESIDENT OF CLEVELAND LEAGUE — OTHER OFFICERS AND DIRECTORS ELECTED

THE ANNUAL election of officers and directors was held May 31, by the Cleveland League and resulted as follows:

President, J. M. Bateman, Po. 2610V.
Vice-president, Mathias Turner, Po. 2401-31.
Treasurer, J. H. Scobell.
Secretary, R. S. Dunning, Po. 16471.

Directors elected: H. B. Dates, W. G. McKitterick, Po. 2448, H. L. Martin, Po. 5642, M. H. Moffett, Po. 2935V, E. H. Ott, Po. 4509, G. E. Rogers, Po. 7295, and Mathias Turner, Po. 2401-31.

Hold-over directors: Norman Anderson, Po. 19044, J. M. Bateman, Po. 2610V, N. H. Boynton, Po. 5604V, H. J. Davies, F. R. DuGuay, Po. 1678, H. O. Leinard, G. S. Milner, Po. 2457, and H. L. Schneider.

One of the first official acts of President Bateman was to introduce a Jovian yell he originated himself. The yell is given in the following manner: One loud slap upon the knees, a pound upon the table, clap your hands, raise your right hand and bring it down slowly as you give a long whistle ascending in pitch, then a long "Ah," in a sighing tone and conclude with the word "Jovian."

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CHARTERED
JOVIAN LEAGUES

Cincinnati	Charter No.	1
Kansas City, Missouri	" No.	2
Pittsburgh	" No.	3
Minneapolis	" No.	4
St. Joseph, Missouri	" No.	5
Louisville, Kentucky,	" No.	6
Stark County Jovian League Comprising the towns of Massillon, Canton and Alliance, Ohio.	" No.	7
Tulsa, Okla.	" No.	8
Eau Claire, Wis.	" No.	9
Harrisburg, Pa.	" No.	10
Wichita, Kan.	" No.	11
Winnipeg, Man.	" No.	12
Bay City, Mich.	" No.	13
Milwaukee, Wis.	" No.	14
Port Arthur, AND Fort William, Ont.	" No.	15
Oklahoma City	" No.	16
Galveston, Texas	" No.	17
Muskogee, Okla.	" No.	18
Mansfield, Ohio Comprising Richland and Ashland Counties	" No.	19
St. Louis	" No.	20
Southwestern Mich. Jovian League Benton Harbor, Michigan	" No.	21

More Are Coming!!!

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EMPLOYERS
CAN YOU USE ANY OF THESE MEN?
Do You Need
AN EXECUTIVE, SALESMAN, SUPERINTENDENT, ENGINEER OR OTHER EMPLOYE?

WE PUBLISH below a list of more than 300 applications now on file with our Employment Bureau, giving the number under each classification and a limited statement of the specifications. Among these you will surely find the man to fill the place you have open. Let us know your requirements, and we will take pleasure in putting the applicants in touch with you promptly. Address The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

CLASSIFICATION	No. on File	Age	Qualifications	Experience	Salary Wanted	Location
Bookkeepers	2	26–31	High School	5–14 yrs.	$65–100	Anywhere.
Central Station Engineers	5	29–45	H. S.-Univ.	6–18 yrs.	$60–200	Anywhere.
Clerical	7	22–47	High School	2–10 yrs.	$65–125	Anywhere.
Commercial Laboratory Workers	1	29	Tech. School	11 yrs.	.....	Anywhere.
Construction Engineers	8	21–39	H. S.-Univ.	4–20 yrs.	$50–200	Anywhere.
Consulting Engineers	2	27	Tech. Grad	8 yrs.	.....	Anywhere.
Draftsmen	2	25–31	Tech. School	5–18 yrs.	$80–150	Anywhere.
Electricians	4	20–35	H. S.-Univ.	3–12 yrs.	$60–100	Anywhere.
Electrical Engineers	18	22–45	Practical-Univ.	5–20 yrs.	$65–300	Anywhere.
Engineers	8	23–31	Practical-Univ.	5–12 yrs.	$120–160	Anywhere.
Estimators	2	26–34	Practical	9–18 yrs.	$90–125	Anywhere.
Fixture Men	2	26–28	Practical	10 yrs.	$140	Anywhere.
Foremen	4	27–31	Practical	7–14 yrs.	$125–160	Anywhere.
General Managers	4	30–34	Practical	7–15 yrs.	$250–417	Anywhere.
Illuminating Engineers	2	26–31	Univ	5–7 yrs.	$100–200	Anywhere.
Linemen	2	24–28	High School	4–9 yrs.	$90	Anywhere.
Maintenance Men	1	26	High School	6 yrs.	.....	Anywhere.
Managers, Commercial Department	1	37	Practical	12 yrs.	$200	Anywhere.
Managers, Contracting	1	26	College	5 yrs.	$125	Anywhere.
Managers, Jobbing House	1	32	College	13 yrs.	$10,000	Anywhere.
Managers, Office	1	32	High School	10 yrs.	$200	Anywhere.
Managers, Plant	19	25–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere.
Managers, Store	1	29	Univ.	10 yrs.	$125	West.
Managers, Railway	1	39	Practical	4 yrs.	$300	Anywhere.
Managers, Traffic	1	37	Practical	15 yrs.	$250	Anywhere.
Manufacturers Representatives	14	30–46	Practical-Tech.	9–20 yrs.	Com.–$300	Anywhere.
Mechanical Engineers	1	40	Univ.	.....	$200	St. Louis.
Meter Testers	2	28–34	Grade-College	8–16 yrs.	$100	Anywhere.
New Business Managers	4	29–34	H. S.-Univ.	9–15 yrs.	$100–200	Anywhere.
Office Executives	8	25–40	Grade-Univ	4–18 yrs.	$80–200	Anywhere.
Purchasing Agent	10	24–41	Grade-Tech	4–21 yrs.	$80–200	Anywhere.
Sales Engineers	11	25–41	College-Univ	4–11 yrs.	$100–200	Anywhere.
Sales Managers	12	28–45	H. S.-Univ.	4–17 yrs.	$150–417	Anywhere.
Salesmen	74	22–55	H. S.-Univ.	2–25 yrs.	$75–200	Anywhere.
Store Keepers	1	33	Practical	10 yrs.	$150	Anywhere.
Superintendents	25	26–46	H. S.-Univ.	3–15 yrs.	$100–500	Anywhere.
Supervisors Lighting	1	25	Technical	7 yrs.	$100	East.
Telephone Engineers	2	24–28	H. S.-Tech.	5–7 yrs.	.....	Anywhere.
Testing Engineers	1	24	Technical	2 yrs.	$100	Anywhere
Wiremen	3	23–30	High School	7–17 yrs.	$75–125	Anywhere.

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JOVIANS!

Can You Use Any of These Jobs?

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, are seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau. A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of any of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

6. **Chemist.** A Chicago lighting supplies factory has an attractive opening for a chemist familiar with the manufacture of flashlight batteries.

9. **Electrical Engineers.** Manufacturing concern wants men acquainted with motor, fan and blower design, who wish to work up as the business grows.

11. **Electrical Supply Salesman.** Old, established house in New Orleans wants active young man to cover southern territory.

13. **Electricians.** A number of men wanted by eastern manufacturer of recording instruments.

14. **Electricians and Wiremen.** Thirty to fifty cents an hour offered by auto repair department of Michigan electric garage.

15. **Estimator.** Eastern manufacturer has opening for man acquainted with the electrical end of the business.

16. **Foreman.** Michigan electric house wants man to handle the practical end of its contracting department.

18. **Office Executive.** Attractive opening for the right man with large Michigan electric house.

19. **Office Executive.** A mid-west electric supply house will pay $125.00 per month for a satisfactory man, with real ability to make good.

20. **Sales Engineer.** An opening, for the right man, with a manufacturer of an electric time recorder.

21. **Salesmen.** New York maker of electric signs wants able salesman to push his goods.

22. **Salesmen, Commission.** Good opening, in live Michigan city, to sell electric appliances.

23. **Storekeeper.** Practical man, with experience in retail electric supply house, needed by a Michigan correspondent.

24. **Store Salesman.** Electric supply house in Michigan has opening for man in retail department.

25. **Superintendent.** An ambitious man, with practical experience, will have consideration by a Michigan electrical contractor.

26. **Testing Engineers.** Electrical instrument manufacturer wants to get in touch with several men.

27. **Traveling Salesmen.** Electrical supply house, located in Montana, wants one city salesman and two to cover the state.

28. **Traveling Salesman.** Ohio manufacturing concern wants a man to cover Ohio, Indiana and Eastern Michigan—one who can eventually become office manager; salary $1200.00 to $1500.00 a year.

29. **Traveling Salesmen.** Chicago electrical manufacturing concern is in need of one or two men on the road.

30. **Salesmen.** Graduate Electrical, who speak spanish, splendid opening with large manufacturing concern over seas territory.

31. **Switchboard Estimator.** Practical man needed at once by large St. Louis contracting house.

32. **Bookkeeper.** Capable man wanted by Cleveland electrical supply house.

33. **Fixture Man.** Cleveland contractor wants to get in touch with the right man for their fixture department.

34. **Sign Salesman.** Special New York city positions open for energetic solicitors.

35. **Store Manager.** Indiana house wants experienced young man to take charge of retail and wholesale departments; salary, $100 per month.

36. **Foreman.** Ohio motor manufacturing concern wants practical man to take care of assembling department.

37. **Power Salesman.** Ohio public service concern is in need of an A1 technical man who can handle the sale from proposal to installation; good salary.

38. **Lighting Salesman.** Good domestic and commercial representative wanted by Ohio central station.

39. **Office Executive.** Detail man wanted for electrical supply house, one familiar with prices, inventory, traffic, purchasing and follow-up systems.

40. **Electrical Engineer.** Manufacturing plant near Pittsburg is in the market for university graduate familiar with A. C. and D. C. switchboards; salary, $125 per month.

42. **Illuminating Engineer.** Attractive opening with firm of consulting engineers.

43. **Fuel Engineers.** Men wanted, must be familiar with economical central station operation.

44. **Electricians.** Oklahoma telephone system is in need of practical men.

45. **Electrical Engineers.** Opening with telephone concern; switchboard and power plant departments.

46. **Meter Testers.** Men wanted in Oklahoma for inspection and testing of phone installations.

47. **Telephone Engineers.** Switchboard engineering department of a southwestern telephone system can use two or three technical graduates.

48. **Testing Engineers.** Attractive opening, with Oklahoma telephone system, for several young men.

49. **Construction Engineer.** Idaho reclamation project needs young man familiar with construction, operation and cost-keeping; must have tact and initiative. $125 per month to right man.

50. **Cost Clerk.** Good salary to man familiar with electrical jobbing business, cost and pricing; New Jersey house.

51. **Salesman.** Electrical supply house wants man to cover New Jersey. Splendid opportunity.

52. **New Business Agent.** Texas public service corporation will pay $100 per month for competent and active man

54. **Electrical Supply Salesman.** Western Missouri house needs man to travel Kansas City territory.

55. **Steam Plant Superintendent.** Opportunity for man thoroughly informed about combustion, and acquainted with boiler room and steam turbine operation; $3,500 per year.

56. **Electrical Supply Salesman.** An opening for New Jersey territory.

57. **Electrical Supply Salesman.** Thoroughly experienced man wanted to travel for Minneapolis house.

58. **Armature Winder.** Opening in New York City.

59. **Telephone Engineer.** Chicago manufacturing concern can use one or two competent men.

60. **Telephone Engineer.** An opening for technical, graduate engineer, in Buffalo.

61. **Sales Engineer.** Single man wanted, familiar with small motor construction and appliance; Pittsburgh territory.

62. **Draftsman.** Cleveland concern needs man with technical education for machine design; good salary.

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JOVIAN HOTELS

HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their **current membership cards** at the time of settlement. **Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage.** Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

	Minimum Without Bath	Minimum With Bath
Asheville, N. C.—LANGREN	.....	.....
Atlantic City, N. J.—ISLEWORTH	$1.50	$2.00
Baltimore, Md.—EMERSON	$2.00	$2.50
Boise, Ida.—IDANHA	$1.00	$1.50
Boston, Mass.—BRUNSWICK	.....	.....
Charlotte, N. C.—BUFORD	$1.00	$1.50
Chattanooga, Tenn.—THERESA	.....	.....
Colorado Springs, Colo.—ACACIA	.....	.....
Columbia, S. C.—COLONIAL	.....	.....
Dallas, Tex.—ORIENTAL	$1.50	.....
Des Moines, Ia.—KIRKWOOD	.....	.....
Denver, Colo.—ALBANY	$1.00	$1.50
Detroit, Mich.—HOTEL TULLER	.....	.....
Dixon, Ill.—DIXON INN	$1.00	.....
Edmonton, Alta.—ALBERTA	.....	.....
Eau Claire, Wis.—EAU CLAIRE	.....	.....
Ft. Wayne, Ind.—WAYNE	$1.00	.....
Ft. Worth, Tex.—METROPOLITAN	.....	.....
Gary, Ind.—GARY	$1.00	$1.50
Grand Rapids, Mich.—LIVINGSTON	$1.00	.....
Harrisburg, Pa.—COLUMBUS	.....	.....
Houston, Tex.—BENDER	$1.50	$2.00
Hutchinson, Kan.—CHALMERS	.....	.....
Idaho Falls, Ida.—ELEANORE	$1.00	$2.00
Jackson, Miss.—ROYAL	.....	.....
Jacksonville, Fla.—MASON	.....	.....
Jacksonville, Ill.—PACIFIC	.....	.....
Kalispell, Mont.—KALISPELL	$1.00	.....
Kansas City, Mo.—COATES	$1.00	$1.50
Lethbridge, Alta.—ALEXANDRIA	$1.00	.....
Los Angeles, Cal.—CLARK	.....	.....
Los Angeles, Cal.—NEW ROSYLYN	$1.00	$1.50
Louisville, Ky.—GALT	.....	.....
Madison, Wis.—CAPITAL	$1.00	.....
Milwaukee, Wis.—CHARLOTTE	$1.00	.....
Mitchell, S. D.—NEW NAVIN	.....	.....
Montgomery, Ala.—EXCHANGE	.....	.....
Montreal, P. Q.—ST. LAWRENCE HALL	.....	.....
Montreal, P. Q.—WINDSOR	.....	.....
Muskegon, Mich.—MUSKEGON	$1.00	$1.50
New Orleans, La.—DE SOTO	$1.00	.....
New York, N. Y.—BRESLIN	.....	.....
Niagara Falls, N. Y.—PROSPECT	.....	.....
Norfolk, Va.—SOUTHLAND	$1.00	$1.50
Oshkosh, Wis.—TREMONT	.....	.....
Peoria, Ill.—MECCA	$1.00	.....
Philadelphia, Pa.—NEW BINGHAM	$1.50	$2.50
Pittsfield, Mass.—WENDELL	$1.50	.....
Portland, Ore.—MULTNOMAH	$1.50	.....
Portland, Ore.—OREGON	$1.00	$2.00
Richmond, Va.—JEFFERSON	$1.50	$2.50
Richmond, Va.—RICHMOND	$1.50	$2.50
Roanoke, Va.—ROCKLEDGE	$1.00	.....
Rochester, N. Y.—POWERS	.....	$2.00
Rutland, Vt.—BERWICK	.....	.....
St. Joseph, Mo.—ST. FRANCIS	.....	.....
St. Louis, Mo.—AMERICAN	$1.50	.....
Salt Lake City, Utah—NEWHOUSE	.....	.....
San Angelo, Tex.—LANDON	.....	.....
San Diego, Cal.—SAN DIEGO	$1.00	.....
San Francisco, Cal.—ARGONAUT	$1.00	$2.00
San Francisco, Cal.—SUTTER	$1.50	.....
Santa Barbara, Cal.—POTTER	.....	.....
Schenectady, N. Y.—MOHAWK	$1.00	$2.00
Seattle, Wash.—SEATTLE	$1.00	$2.00
Sheridan, Wyo.—SHERIDAN	.....	.....
Shreveport, La.—YOUREE	.....	.....
Sioux City, Ia.—MARTIN	$1.00	$2.00
Spokane, Wash.—SPOKANE	.....	.....
Springfield, Mo.—COLONIAL	.....	.....
Tacoma, Wash.—OLYMPUS	.....	.....
Three Rivers, Mich.—THREE RIVERS	$2.00	.....
Tucson, Ariz.—HEIDEL	.....	.....
Vicksburg, Miss.—CARROLL	$1.00	.....
Waco, Tex.—NEW STATE	$1.00	$2.00
Watertown, S. D.—KAMPESKA	$1.00	.....
Winnipeg, Man.—ST. REGIS	$1.50	.....
Winnipeg, Man.—WELLINGTON	$1.00	$1.50
Winona, Minn.—WINONA	.....	.....

A DOLLAR - AND - CENTS DIRECT-TO-YOU RETURN ON YOUR JOVIAN DUES!

READ PAGES EIGHTEEN AND NINETEEN.

JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, W. N. Lockhert, Po. 14383, care N. O. T. & L. Co.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, C. O. Nichols, Po. 15537, care Benton Harbor & St. Joseph Railway & Light Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, Edmond D. McCarthy, Po. 589-10, 41 East Eagle Street.

CHATTANOOGA—Wednesday, 12 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge, 1900 Continental & Commercial Bank Building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, O. B. Marsh, Po. 17718, care Federal Sign System (Electric), 37 East Third street.

CLEVELAND—Regular meeting, Thursday, 12 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Ry. Power & Light Co.

DALLAS—First and third Mondays, Hotel Adolphus, 12:15 p. m. Secretary, E. E. Roessler, Po. 12128, P. O. Box 1506.

DAYTON—First and third Mondays of each month, 12 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Co.

DENVER—Wednesday, 12:15 p. m., Kaiserdorf Hotel. Secretary, R. Arnold Lewis, Po. 11514, care Edins Lamp Works.

EAU CLAIRE.—First Monday each month. Secretary, Gurth Williams, Po. 18268.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Co.

GALVESTON—Meet on call. Secretary, Howard Jolly, Po. 16826, care Postal Tel. Co.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Co.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Co.

HUNTINGTON—Last Friday each month, Huntington Hotel. Secretary, H. A. Haddox, Po. 9164, 1116 Fourth avenue.

INDIANAPOLIS—Monday, 12:15 p. m. Secretary, A. H. Smith, Po. 13580, care Ford Motor Car Co., 1315 East Washington Street.

KANSAS CITY—Every other Friday, 12:15 p. m., Sexton Hotel, Secretary, T. R. Harber, Po. 18908, 1500 Grand Avenue.

LA CROSSE—First Thursday each month, Elks Club, 6 p. m. Secretary, Dan. J. Whalen, Po. 16022, care Thill-Manning-Whalen Co.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Co.

LOS ANGELES—Wednesday, 12 m., Jahnke's Tavern, 534 S. Spring St. Secretary, Clifton Peters, Po. 12734, 108 Edison building.

LOUISVILLE—Tuesday, 12:15 p. m., Hotel Henry Watterson. Secretary, C. C. Dicken, Po. 16660, care Louisville Gas & Electric Company.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel.

MILWAUKEE—Tuesday, 12 m., Maryland hotel.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

MUSKOGEE—Secretary, J. H. Schmidt, care Muskogee Gas & Electric Co.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Co.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne St., New Orleans, La.

NEW YORK—First Wednesday each month, 12:15 p. m., Browne's Chop House, 1424 Broadway. Secretary, H. E. Cleland, Po. 18656, care Electrical World, 239 West Thirty-Ninth Street.

OKLAHOMA CITY—Monday, 12:15 p. m., Lee Huckins Hotel. Secretary, O. T. Jenkins, Po. 14273, care Nunn Electric Co.

PEORIA—First and third Saturdays of each month, 1 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Co.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon St.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, J. H. Van Aernam, Po. 14051, care General Electric Co.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's restaurant, Kellog street. Secretary, J. O. Roser, Po. 10412, care General Electric Co.

RICHMOND—Third Wednesday of each month, Business Men's Club. Secretary, L. E. Walker, Po. 6610, care Western Electric Co.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Co.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Co.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Ridpath, Po. 7739, 505 Rialto building.

SPOKANE—First and third Wednesdays of each month, 12 m., Davenport's hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Co.

STARK COUNTY—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

ST. LOUIS—Tuesday, 12:15 p. m., Mercantile Club. Secretary, Geo. McD. Johns, Po. 9052, Room 401, City Hall.

ST. JOSEPH, MO.—Secretary, W. R. Thomas, Po. 1489, care American Elect. Co.

ST. PAUL—First and third Thursdays of each month, 12:10 p. m., Emporium Tea Rooms. Secretary, A. L. Frankenburger, Po. 5289, care Western Electric Co., 235 East Sixth street.

TULSA, OKLA.—Monday, 12 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G. Walker, Po. 6871, 18 West Third Street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Co.

WICHITA—First and third Mondays of each month, 12 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Co.

WINNIPEG—Every other Wednesday, 12:15 p. m., Hotel St. Charles. Secretary, C. T. Kummen, Po. 15957, 386 Donald Street.

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THE JOVIAN

Volume Eleven AUGUST, 1917 Number Nine

JOVIAN HARMONY COMMITTEE ACCOMPLISHES EXCELLENT RESULTS

TWO-DAY SESSION IN CINCINNATI BRINGS ABOUT ADJUSTMENT OF VEXING PROBLEMS SATISFACTORY TO ALL VIEW-POINTS REPRESENTED BY COMMITTEE

THE REPORT of the Jovian Harmony Committee given below represents the most constructive work that has been accomplished in the efforts of the past six months to harmonize the great variety of opinions that have existed as to changes required in the procedure of the Order.

The report is submitted as the unanimous decision of the committee. Its contents will be framed as amendments to the existing Jovian Constitution and will be presented for final action at the next Annual Convention of the Order to be held during October of this year.

REPORT OF JOVIAN HARMONY COMMITTEE, CINCINNATI, JULY 25-26

Origin of Committee The Harmony Committee was appointed by Jupiter Henry L. Doherty as the outgrowth of the meeting of the Special Commission held in Cleveland April 3-4, 1917, and the meeting of Past Jupiters and Congress held in Chicago June 12-13, 1917. Those meetings demonstrated that the purpose for which they were called could be better accomplished by a smaller committee.

Purpose The purpose of the committee was to consider the problems that were obstructing the best progress of The Jovian Order and devise ways and means of solving them.

Personnel The committee was composed of Mercury Ell. C. Bennett, Po. 3932-13, St. Louis, chairman; Congressman William Gloeckner, Po. 2370, Philadelphia; Congressman Martin J. Wolf, Po. 6027, St. Louis; First Tribune Thos. J. Creaghead, Po. 3013, Cincinnati; First Tribune J. M. Bateman, Po. 2610, Cleveland.

These Jovians represented a diversity of opinion as to the needs of the Order, that was wide enough to practically cover all such opinions existing throughout the entire membership; they also represented four important Jovians centers.

Method of Procedure For the purpose of conserving the time of the committee it was agreed that a skeleton of all subjects to be discussed and the method of discussion should be outlined upon a blackboard and that outline adhered to. This course was followed with excellent results.

Subjects Discussed The subjects discussed embodied every suggestion and criticism of any importance which from many sources had reached the Central Office and the members of the committee. They were brought up for discussion and decision without prejudice and covered by the committee in an impersonal manner with but one object in view, i. e., the future welfare of Jovianism.

Results of Meeting The subjects that were considered and the decisions of the committee follow herein. It is well to emphasize that no finding of the committee was adopted without exhaustive analysis made by men who were thoroughly familiar with the matters in hand.

FUNCTION, ORGANIZATION, MEMBERSHIP, FINANCING, OPERATION

Under this head the following suggestions were considered:

Function (a) Shall the function of the Order be that of an International Association of Local Leagues, or an International Association of Individuals?

Committee Decision The committee unanimously recommended that the chief function of The Jovian Order shall be that of an International Association of Jovian Leagues.

That the organization shall retain its present status of an international, semi-fraternal, goodfellowship, constructive, development body, and shall be made up of a large membership representative of the personnel engaged in all branches of the electrical industry, and shall perform the definite function of guiding and co-ordinating the activities of Local Leagues; it shall perform its major development work, its general activities, through those established Leagues.

That with the exception of the changes hereinafter recommended it shall operate as at present constituted and governed.

Membership Classification (b) Shall there be only one class of membership, i. e., membership in a Jovian League chartered by and affiliated with The Jovian Order?

Shall a candidate when accepted by a Local League thereby automatically become a member of The Jovian Order?

In considering questions (b) the committee realized that under such an arrangement, first, a Jovian would be required to join a Local League, also, every member of a Local League would be forced to become a Jovian.

Committee Decision The committee believed that while such a plan could and probably would be eventually operated successfully, that it must be built up gradually and that a radical change as great as this without adequate preparation would be fatal to the best interests of both the Local Leagues and the Order. It was accordingly voted down by unanimous consent.

Ritual (c) Shall the official ritual of the Order and the short lecture form be abandoned and candidates accepted into the Order without ceremony, with perhaps the official ritual presented at Annual Conventions?

Committee Decision The committee unanimously voted down this suggestion on the grounds that a properly conducted ceremony accompanying initiation to membership assisted in impressing the candidate with the serious purposes of the Order and the high moral standard it advocated.

Jovian Oath (d) Shall the Jovian oath as now included in the official ritual be revised or re-written?

Committee Decision The committee believed that the oath as now in effect is not in keeping with the dignity and otherwise elevating and educational character of the ritual and unanimously recommended that the oath be revised or entirely re-written.

(continued to page ten)

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

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ORGANIZING FOR AFTER-THE-WAR TRADE

IS THE electrical industry of the United States prepared for the great commercial fight whose shadow is cast ahead of that other great war of bloodshed and destruction now being waged?

That, too, will be a fight for supremacy such as the earth has not witnessed before. It will be a fight for trade, scientifically planned and systematically waged. It will be a fight of organizations composed of groups of industries backed and abetted by governments and propelled by the combined commercial forces at the command of each nation.

Single commercial units operating alone will find themselves at a woeful disadvantage no matter how efficient their organization or how valuable their products. The machinery of combinations of allied industries, shipping and distribution organizations will be arrayed against them. It will not be a mere question of competing along the lines of merit and prices; the many features involved in the establishment of distribution agencies will require something more than straight salesmanship and attractive lines of products.

The well-informed American exporter knows there are many features to be considered in competing for foreign trade. A knowledge of conditions, native characteristics and influences are essential to success. In a number of foreign countries prejudice is very easily created and demand does not always arise from a logical deduction as to what will best fill requirements.

The value of strong co-operative organizations to work the fields of trade in a systematic manner should be apparent.

The electrical industry of other nations will be mobilized to their full strength for the world-wide drive for trade. If the American industry expects its share of the business an organization as strong as that of other nations will have to be effected.

* * * *

THE STORY OF OLD HARDSIDE

ALMOST every one has heard of Old Hardside, the merchant who believed his competitors were all thieves and conspirators continually seeking to injure his business by underhand practices.

Old Hardside, you know, considered every one engaged in his particular line of business his mortal enemy. If he got the best of one of them in a deal it was the source of very much satisfaction. The incident exalted his estimation of his own shrewdness and business ability, and he chuckled congratulations to himself.

If, on the other hand, a competitor beat him to a sale or took away one of his customers, he set his jaw hard, suffered inwardly, and cast about him for a plan for revenge. All the logic of Socrates would have failed to convince him that he had not been the victim of some slick scheme or underhand trick, fostered in the wily brain of his competitor and put into effect for the sole purpose of injuring him.

Business to him was but a round of trickery, schemes and underhand tactics—the practices of his competitors—against which he was forced to compete and to protect himself. He really imagined that he was the only honest man engaged in his line, that he dealt squarely, but that it was absolutely essential to his self-preservation to get ahead of his competitors. So, when HE resorted to trickery, it was merely for the purpose of fighting the devil with fire.

Imagine with what degree of suspicion Old Hardside regarded a committee composed of his competitors who called upon him and proposed a business organization. Just imagine the shrewd look he bestowed upon them as they unfolded their plans, and the activity of his mind in its research for a solution of their ulterior motive.

What new trick were they up to? How was he going to defend himself against them? were questions that surged through the old man's mind. He could see nothing in their joint visit but a combination against him, and all his shrewdness was marshalled to protect himself against their plot, and, if possible, to beat them at their own game.

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The idea that the plan they proposed for organizing would be of benefit to himself did not enter into his calculations.

Of course, he understood that co-operative organization possessed many logical advantages. There were a number of ways men engaged in similar lines of business could be of benefit to one another, but who ever heard of them doing it? Practically it was against the rules of business for competitors to work for each other's interest.

The thing that surprised Old Hardside very much about some of the members of the committee whom he had never seen before was the fact that they actually appeared to be human. From their methods of dealing in the past, he had come to imagine they wore horns and each had a cloven hoof on one ankle. Instead of these Plutonian characteristics, to all outward appearances, at least, they possessed all the attributes of respectable citizens.

Another peculiar thing about them, each member was inclined to be sociable. In many respects they acted very much like some of his acquaintances for whom he possessed a warm feeling of friendship.

He was introduced to Smith and Jones and found himself staring at them, unable to reconcile his ideas of their personalities with their identity. They were not at all as he had pictured them. He could not bring himself to believe that men with such pleasant faces and such gracious manners could possibly be the two competitors whom he felt certain had frequently tried to ruin his trade.

Their pleasant appearance and cordial manner restrained him from telling the committee flatly that he would have nothing to do with their organization. He felt an unaccountable reluctance to be as rude as he has always imagined he would be should he ever meet some of them.

After explaining their mission some of the committee began to look around his store.

Although they complimented him very highly on the appearance of his stock, Old Hardside could not help regarding their inspection with suspicion. He imagined they were trying to discover some of the secrets of his trade.

Finally Jones came upon some goods with which the old man was badly over stocked.

"These seem to be selling very slowly, haven't you much demand for them?" he asked.

Old Hardside admitted very reluctantly that he was overstocked and had no demand for that particular kind of goods.

He could scarcely credit his hearing when Jones informed him that he had a good demand for that very line, and would be glad to take them off his hands at market value.

Then the old man "thawed out" a little and told something about his trade.

When one of the other members of the committee volunteered to supply him with some other brand of goods that he needed badly and could not obtain because the factory was behind with its orders; another gave him a valuable pointer about handling some of his stock with which he had previously had a great deal of trouble, and still another warned him not to sell to a customer who was on the verge of bankruptcy, Old Hardside came out of his shell and actually promised to give the question of joining their organization serious consideration.

There are still a few business men in the world whose methods resemble those of Old Hardside. They may not be as antique in their dealings, but there is a lot of business jealousy being harbored in their minds because they are not acquainted with their competitors, and consequently do not know their methods, aims and ambitions.

Their suspicion of their competitors' honesty is for the most part based on imagination, it is frequently entirely without foundation, and yet it has caused many ruinous commercial wars involving the loss of thousands of dollars that an exact knowledge of facts would have prevented.

The Jovian organization provides a neutral ground where competitors may meet and affords an opportunity for the correction of erroneous impressions arising from a biased long-distance appraisal. This valuable function of Jovianism added to its influence in promoting a feeling of good-fellowship and the many benefits that result from advice, information and the exchange of favors marks the Order a constructive institution. While its benefits are not always in direct evidence it does not require a stupendous amount of thought to show its great value as a business asset.

* * * *

THE JOVIAN INSURANCE BENEFIT

THAT the insurance plan adopted by the Order fills a need of the membership is already apparent. Inquiries have poured into the central office from every section of the country. Application for insurance are following the distribution of the plan with equal promptness.

There is nothing surprising in the interest the insurance feature has aroused. The reason is apparent. It shows an actual saving in dollars and cents on its face, and also shows how and why this saving is possible.

In plain words the central office of the Order is doing the work of selling, distributing and collecting for the insurance company, a service that is estimated by insurance companies to be about half of insurance cost. That is the whole secret of the saving for the members.

As accident and health insurance is something that every member of the fraternity carries or should carry, it is easy to see how the feature is attractive to such a large majority of the membership.

The Jovian predicts that this benefit will prove the greatest aid to increased membership that the Order has ever known.

* * * *

"KEEP BUSINESS GOING" CAMPAIGN INAUGURATED BY THE SOCIETY FOR ELECTRICAL DEVELOPMENT

THE Society for Electrical Development has inaugurated a campaign to promote business activity, which it has called, the "Keep Business Going" campaign, by mailing a broadside circular to its entire mailing list.

Included in the contents of the circular is an important letter signed by Henry L. Doherty, president of the society and Jupiter of the Jovian Order, suggesting that in view of the greatly widened market for electrical service it is time to lay aside petty jealousies in the industry and concentrate on building business.

The circular points out the possibilities of electric power to replace steam power; lighting for protection, and electrical appliances to lighten the labor of the home and farm.

A number of valuable books have been prepared by the Society for the use of the industry in the present situation, the newest of which gives a list of 3,000 applications of electricity to industrial and commercial life in general.

There has also been prepared a special power-application service for providing data for use in developing power prospects.

AN EXAMPLE OF THE UNUSUAL OPPORTUNITIES THAT ARE BEING PRESENTED TO OUR EMPLOYMENT BUREAU

ONE LARGE CONCERN WRITES

"We want capable young men whom we can train for important inside and outside sales positions—young men with technical, high school or university education; of good habits, clean cut and bright. The younger they are the better. Will give such a general training course, starting them at $14 per week and quickly raising to $18 or $20, with the future depending on themselves; or will, if possible, take on more experienced men at a higher rate.

"This is a most important matter. Will you make a special effort to put us in touch with such material?"

THE ABOVE OPPORTUNITIES ARE NOW AVAILABLE

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Jovian Harmony Committee Report

(continued from page seven)

Chartered League Territory (e) Shall chartered Jovian Leagues be permitted to elect members from territories not included in the district named in their charters—in other words, shall a member have the right to choose the League with which he shall affiliate regardless of whether or not the League of his choice shall have been assigned the district in which he resides?

Committee Decision The committee unanimously recommended that the Leagues and the members should be delegated that privilege.

Executive Committee In Charge Of Activities (f) Shall an Executive Committee of six be appointed or elected each year, each member to have full charge (with authority over the Central Office) of one major activity of the Order—for example, insurance, membership, convention, employment, publication, educational and development?

Committee Decision The committee unanimously voted down this suggestion, four of the committee holding that Mercury, as the paid officer in charge of the Central Office, should be given the right of decision and be held accountable for results.

Officers—Nomination and Election

Congress (g) Shall Congressmen and Statesmen be elected by the members of their respective districts and states, in place of election by the membership at large as at present?

Committee Decision The committee unanimously recommended that the following procedure be adopted:

First: Any chartered Jovian League may nominate by a majority vote, certified to by not less than two of its regular officers and cast at a special or regular meeting called for the purpose, one Congressman and one Statesman for office in the district and state in which it is chartered.

Second: Jovians, to the number of not less than twenty-five, residing in any city or town not having a chartered Jovian League may nominate one Congressman and one Statesman for office in the district and state in which they reside, by signing a petition setting forth their selection or selections.

Third: All certificates and petitions of nomination, accompanied by signed statements of the nominees that if elected they will accept office and fulfill the duties thereof, must be in the hands of Mercury not later than June 10, or, if mailed, bearing a postmark not later than that date.

Fourth: All nominations so received shall be published in the issues of the Jovian magazine mailed during June, July and August.

Fifth: Mercury shall, not later than August 1, supply each member in good standing with a ballot bearing the names of all candidates.

Sixth: Each member in good standing desiring to vote shall indicate his choice for one Congressman and one Statesman, in his district and state only, upon the ballot in the manner set forth thereon, and shall return the ballot to Mercury not later than September 1, or, if mailed bearing a postmark not later than that date.

Seventh: Notice of the result of the election shall be published in the issue of the Jovian magazine mailed during September.

Eighth: Congressmen and Statesmen shall be with appropriate ceremony introduced in their respective capacities, to the delegates to the Annual Convention first following their election.

Jupiter and Mercury (h) Shall the present method of nominating and electing Jupiter and Mercury be changed?

Committee Decision By unanimous consent the committee recommended that the present method be abandoned and the following procedure substituted:

First: Jupiter and Mercury shall be nominated by a Nominating Committee composed of Reigning Jupiter as chairman, the three Jupiters who next preceded Reigning Jupiter and three Reigning Congressmen selected by Reigning Jupiter.

Second: Nominations for Jupiter and Mercury shall be in the hands of Mercury not later than August 1 and shall be published in all issues of the Jovian magazine mailed between the time of receipt by Mercury and the time of the next Annual Convention.

Third: Jupiter and Mercury shall be elected at the Annual Convention.

Fourth: The present method of electing officers and of amending the constitution and for other convention purposes shall obtain except that no one delegate shall have the power to cast more than fifty votes.

Fifth: Jupiter and Mercury shall be introduced to the delegates of the Annual Convention in the same manner provided for Congressmen and Statesmen.

Officers Term Of Office (i) Shall all officers, regardless of the time of their election or appointment hold office until January 1 in order that the newly elected Jupiter, Mercury, Congressmen, Statesmen, etc., may have sufficient time between the date of their election and the date of their installation in office to plan their organization and activities?

Committee Decision The committee unanimously recommended that this suggestion be adopted.

Meetings of Congress (j) Shall Congress be required to meet for the purpose of promoting the affairs of the Order at each Annual and Special Convention of the Order, regardless of other meetings which it may hold?

Committee Decision The committee unanimously recommended that Congress should be required to so meet.

Authority of Congress (k) Shall Congress be supreme in authority over the affairs and conduct of the Central Office, directing and receiving the reports of the activities of that office?

Committee Decision The committee voted down this suggestion.

(l) Shall members of Congress in addition to their duties as district officers constitute for Jupiter and Mercury an Advisory Board on matters relating to the entire membership and territory of the Order?

Committee Decision The committee recommended that Congress be delegated that power.

Past Jupiters' Association (m) Shall the veto power at present delegated to the Past Jupiters' Association be rescinded?

Committee Decision The committee believed that in the present day development and enlargement of the serious and conservative elements in the Order that the powers delegated to the Past Jupiters' Association are now unnecessary to safeguard action taken by the Order. Realizing that this power of veto was not sought by the Past Jupiters and that there is no desire to retain it after its usefulness has expired the committee recommended that the veto power at present held by the Past Jupiters' Association should be revoked. The committee further recommended that some provision be made to secure benefit of the experience and ability of the members of the Past Jupiters' Association in the capacity of an Advisory Board.

Distribution of Dues (n) Shall the present distribution of Jovian dues collected by Chartered Leagues be changed so that the proportion sent to the Central Office ($3.50 out of $4.00) shall be smaller?

Committee Decision The committee, realizing the extremely important bearing of this matter upon the future of the Order and the Leagues, gave it unusual consideration and analyzed it from every possible angle and viewpoint.

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The decision finally made was based on the lowest possible amount that could be sent to the Central Office and have that office continue, even after every item of expense that could be eliminated had been so handled. The committee proved by actual facts and figures that the minimum amount to the Central Office could not be reduced below $2, and that, therefore, it should not be reduced below that amount until some other method of financing the Order was supplied, or the need of such financing ceased to exist. The committee accordingly recommended that the dues to the Order shall remain at $4, with the present provisions as to collection and place of payment undisturbed, but that all Jovian dues of $4 collected by Chartered Leagues shall be divided equally between the Leagues and the Central Office; the Leagues, therefore, retaining $2 and remitting $2 to the Central Office. The total amount of dues to Local Leagues is left entirely within the discretion of each local organization.

This recommendation was unanimous.

Central Office Expense (p) Shall the expense of operating the Central Office be reduced?

Committee Decision The committee gave this matter unusual attention, including a complete canvass of every item with the possibility in mind of its reduction or elimination. The committee recommended that the practice of furnishing buttons to new members be discontinued.

The committee further recommended that the cash prizes given for Degree Team competition at Annual Meetings amounting to $350 be discontinued.

The committee further recommended that the amount paid into the Past Jupiters' Endowment Fund each year shall be determined until October 16, 1920, on the basis of one-tenth of one per cent in place of the present basis of two and one-half per cent; that on the date mentioned it shall be returned to the present basis.

The committee further recommended that the practice of furnishing free costumes and paraphernalia be discontinued and the outfits owned by the Order be sold to the highest Jovian bidders.

All of these recommendations were unanimous.

Mercury's Compensation (q) Shall the method of establishing Mercury's compensation be changed?

Committee Decision The committee recommended that the present method shall be abandoned and that Mercury's compensation shall be fixed each year by the Nominating Committee as previously defined.

* * * *

N. E. C. A. PLANNING FOR BIG CONVENTION AT NEW ORLEANS

NEW ORLEANS members of the National Electrical Contractors' Association are planning one of the most active conventions in the history of the Association, when the delegates and visitors assemble at that point October 10, for their three day's annual meeting. The local Jovian League has gone into the matter of arranging for the convention with a zest that has been very gratifying to Robley S. Stearnes, Po. 1501, Thirteenth Apollo, President of the Association.

The convention will be held at the Grunewald Hotel, and an electrical exhibit is being arranged that should prove of unusual interest.

While the convention will be of a business nature there are features of unusual importance to be considered that will make it one of great interest and a large attendance is expected.

ANTICIPATING YOUR THOUGHT

TO PROVE TO YOU THAT YOU NEED THE BIG JOVIAN BENEFIT

NOW!

IF YOU DO NOT CARRY INSURANCE

If you do not carry Accident or Health Insurance you are neglecting to provide yourself with what has long ago been established as an essential to well-ordered personal affairs.

The Jovian Policies afford you the opportunity of securing this necessity at approximately half price, as a direct dividend on your Jovian membership.

The Jovian Order is not trying to SELL you something; it is striving to render you a valuable service.

IF YOU CARRY COMMERCIAL MEN'S INSURANCE

If you believe that you are fully covered by nine-dollar policies of the so-called "Commercial" or "Traveling Men's" Associations, we advise you to thoroughly investigate what you have bought.

The policies of nearly all, if not all, such companies include a number of exemptions and exceptions. They are not, in our opinion, the full coverage you should have, and under them you are liable for additional assessment.

(Read their By-Laws. That is where the exemptions are noted.)

An article is not a bargain if it does not fulfill the duty for which it is purchased.

IF YOU CARRY OTHER INSURANCE

The Accident and Health Policies issued by the foremost companies, as a rule, provide splendid, full coverage—but because of the tax imposed upon them by agents' commissions, overhead and office detail, can not be sold to you at a price approximating the Jovian Policies.

Arrange now to substitute the Jovian Policies when the others expire.

IF YOUR POLICY HAS EARNED AN ACCUMULATIVE VALUE

Some policies provide for an accumulative value, applying, however, only to death and dismemberment. The maximum increase is fifty per cent, and it is necessary to carry the policy from five to ten years to earn such maximum.

If you have a policy upon which such increase has matured you will find that even with such increase the Jovian Policy is a greater value for less money.

IF YOU HAVE COMBINATION HEALTH AND ACCIDENT

If you have a combination Health and Accident Policy, the Jovian Policies can be applied to take its place at a very considerable saving to you.

IF YOU ARE NOW CARRYING ALL YOU WANT

The fact that you may be carrying all the Accident and Health Insurance you reasonably should is certainly no bar to your benefiting by this Jovian proposition.

Make arrangements now with the Jovian Central Office to change to the Jovian Policies when your others expire, and save approximately half what they are costing you.

HOW TO MAKE APPLICATION

Between pages 18 and 19 you will find an application blank with further information. Why not fill it out and mail it NOW, before other matters cause you to forget the great benefit it offers you?

Full or partial payment, as you elect, when you receive the policy.

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NOMINATIONS FOR THE 16TH JOVIAN ADMINISTRATION

REGULAR TICKET

NOMINATED BY THE OFFICIAL NOMINATING COMMITTEE

W. N. MATTHEWS, Po. 496-44V, St. Louis, Chairman.
CHARLES W. HOBSON, Po. 1, Dallas.
E. FREEMAN, Po. 7178, Chicago.
JOHN A. BRITTON, Po. 7380, San Francisco.

SIXTEENTH JUPITER
J. F. STRICKLAND, Po. 30,
Texas Power & Light Company, Dallas, Texas.

SIXTEENTH MERCURY
ELL C. BENNETT, Po. 3932-13V,
St. Louis, Mo.

SIXTEENTH CONGRESS

DISTRICT No. 1
WILLIAM R. PHIPPS, Po. 10676,
Brush Electric Company, Galveston, Texas.

DISTRICT No. 2
JOSEPH INSULL, Po. 16729,
General Electric Company, Pittsfield, Mass.

DISTRICT No. 3
HARRY W. ALEXANDER, Po. 17191,
care Society for Electrical Development, New York City.

DISTRICT No. 4
ARTHUR G. PIERCE, Po. 2896,
Cutler -Hammer Manufacturing Company, Pittsburgh, Pa.

DISTRICT No. 5
ROBERT MONTGOMERY, Po. 6147,
Louisville Gas & Electric Company, Louisville, Ky.

DISTRICT No. 6
JULIEN BINFORD, Jr., Po. 1174V,
Westinghouse Lamp Company, Atlanta, Ga.

DISTRICT No. 7
W. R. POWER, Po. 2784,
Consolidated Heat, Light & Power Company, Huntington, W. Va.

DISTRICT No. 8
GALEN CROW, Po. 925,
Public Service Company of Oklahoma, Guthrie, Okla.

DISTRICT No. 9
L. O. RIPLEY, Po. 7042V,
Kansas Gas & Electric Company, Wichita, Kan.

DISTRICT No. 10
HENRY N. REMINGTON, Po. 678V,
Central Illinois Light Company, Peoria, Ill.

DISTRICT No. 11
WILLIAM T. WALLACE, Po. 1716,
Idaho Power Company, Boise, Idaho.

DISTRICT No. 12
H. L. WOOLFENDEN, Po. 1062V,
Allis Chalmers Company, Denver, Colo.

DISTRICT No. 13
J. N. COLKITT, Po. 2627,
John A. Roeblings' Sons Company of California, Los Angeles, Cal.

DISTRICT No. 14
Vacant.

DISTRICT No. 15
Vacant.

STATESMEN

ARKANSAS
C. J. GRIFFITH, Po. 13901,
Little Rock Railway & Electric Company, Little Rock, Ark.

ARIZONA, CALIFORNIA, NEVADA
LEWIS E. SPERRY, Po. 9415,
New York Insulated Wire Company, San Francisco, Cal.

IOWA
H. W. GARNER, Po. 19507,
Des Moines Electric Company, Des Moines, Iowa.

INDIANA
WALLACE O. LEE, Po. 11440,
Indianapolis Light, Heat & Power Company, Indianapolis, Ind.

KENTUCKY
J. B. RILEY, Po. 5297,
Westinghouse Lamp Company, Louisville, Ky.

LOUISIANA
W. A. PONTEOUS, Po. 9226,
care Western Union Telegraph Company, New Orleans, La.

MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA
W. H. VILETT, Po. 3675V,
Sterling Electric Company, Minneapolis, Minn.

MARYLAND
J. G. LIVINGSTON, Po. 1721,
care Southern Electric Company, Baltimore, Md.

MISSOURI
FRED JOHNSON, Po. 177V,
Wagner Electric Manufacturing Company, St. Louis, Mo.

NEW JERSEY, DELAWARE
H. C. STERLING, Po. 11014,
Atlantic City Electric Company, Atlantic City, N. J.

NEW MEXICO
J. A. SHEPARD, Po. 16106,
care Deming Ice & Electric Company, Deming, N. M.

STATESMEN—Continued

NEW YORK
E. G. HINES, Po. 16222,
Electrical World, 239 West Thirty-Ninth Street, New York, N. Y.

OHIO
J. M. BATEMAN, Po. 2610V,
Western Electric Company, Cleveland, Ohio.

OKLAHOMA
CHARLES McCALLUM, Po. 3394,
Western Electric Company, Oklahoma City, Okla.

TENNESSEE
C. J. R. WATSON, Jr., Po. 2131V,
care Electric Supply Company, Memphis, Tenn.

TEXAS
HIRAM O. CLARK, Po. 6629,
Houston Lighting & Power Company, Houston, Texas.

UTAH
CHAS. H. TALMAGE, Po. 1431,
care Western Electric Company, Salt Lake City, Utah.

WISCONSIN
CARL GOLIN, Po. 12385V,
Northwestern Storage Battery Company, Milwaukee, Wis

(NOTE.—The chairman of the Nominating Committee states that Congressional Districts numbered 3, 14 and 15, and those states not covered by nominations in the above list, are being carefully canvassed, and will be covered by nominations at an early date).

ADDITIONAL NOMINATIONS

The Jovian Constitution provides that, in addition to the "Regular Ticket" selected by the Nominating Committee, any member in good standing may be nominated for any elective office (provided that he is not disqualified by some provision of this Constitution) by a petition signed by not less than one hundred members in good standing, provided that such petition or petitions must be delivered to Mercury not later than the first day of September. Mercury shall publish such nomination, or nominations, in each issue of the Jovian official publication prior to the then next Annual Convention under the heading: "Independent Ticket, Nominated by Petition."

A SAMPLE OF MANY APPRECIATIVE COMMENTS

"I thank you very much for the interest you have taken in helping us find solicitors.

"The Employment Bureau ought to be appreciated by all our members. I for one will surely look for assistance from it in the future, and so should all other Jovians use this means. It is a genuine aid both to those seeking men as well as those needing employment."

COMMERCIAL CONDITIONS AFFECTED BY WAR

On June 15 President Wilson issued a proclamation, following an act of Congress, prohibiting exports of coal, food, grains, meats, steel and other products except by license.

* * * *

Effective July 1, the Mexican government increased export duty on wool to 40 cents Mexican gold per kilo and on hair to 20 cents Mexican gold per kilo.

* * * *

The American consul at Petrograd has forwarded to the Bureau of Foreign and Domestic Commerce a list of Petrograd firms that have trade connections with the United States and of Russian firms that have applied to the consulate for information with regard to trade with the United States. These lists may be obtained from the bureau or its district or co-operative offices. Reference should be made to file No. 89784.

* * * *

Commercial reports show an industrial and agricultural revival in Brazil and a growing demand for American farm machinery and implements. Agricultural conditions in each of the Brazilian states are contained in a report entitled, "Markets for Agricultural Implements and Machinery in Brazil," Special Agents Series No. 140. Copies of the report may be obtained at 10 cents each from the Bureau of Foreign and Domestic Commerce, or the Superintendent of Documents, Government Printing Office, Washington, D. C.

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Personal Pointers

I met a man I use to know,
Who one time lived in Jericho,
And when he bade me "howdy-do,"
He asked about the folks he knew.
I told him who was sick and dead,
And he was glad to hear, he said.

* * * *

J. M. Bradley, Po. 13203, First Tribune, Coniston, Ont., is now in Toronto, and expects to enlist in some branch of the military service.

* * * *

R. E. Gorton, Po. 1367, was elected secretary of the Packard Electric Company, of Warren, Ohio, at a recent meeting of the board of directors of the company.

* * * *

H. C. Schimpff, Po. 13170, formerly traveling representative of the Illinois Traction Company, Peoria, Ill., was recently appointed commercial manager of that company.

* * * *

H. M. Kohn, Po. 18503, recently resigned his position as commercial manager of the Birmingham (Ala.) Railway, Light & Power Company, to engage in business for himself.

* * * *

Joseph Desloge, Po. 11584, president of the Killark Electric Manufacturing Company, St. Louis, Mo., sailed for France some time in June to join the American Ambulance Corps.

* * * *

M. Marquiz, Po. 18784, manufacturer of silk and cretonne electric shades, 37 South Wabash Avenue, Chicago, has opened an office in Philadelphia, at room 411, Commercial Building.

* * * *

H. M. West, Po. 19599, until recently with Westinghouse, Church, Kerr & Company, New York City, has been appointed manager of the Harrisburg (Pa.) Light & Power Company.

* * * *

Charles Engle, Po. 16621, has resigned his position with the H. W. Johns-Manville Company, Chicago. and is now with the Globe Electric Company, 193-195 Broadway, Milwaukee, Wis.

* * * *

F. T. Coup, Po. 16600, has been given charge of the Milwaukee office of the Wagner Electric & Maunfacturing Company. He was formerly connected with the Chicago office of the company.

* * * *

T. J. Fleischer, Po. 2884, formerly connected with the selling department of the Crouse-Hinds Company, Cleveland, has been transferred to New York and given charge of the company's office in that city.

* * * *

O. E. Wessel, Po. 9814, formerly power engineer, with the East St. Louis (Ill.) Light & Power Company, is now connected with the Louisville Industrial Foundation, 202 Columbia Building, Louisville, Ky.

* * * *

Frederick Rall, Po. 736, manufacturers' agent, 19 Park Place, New York City, has recently secured the agency for the Jewell Electric Instrument Company of Chicago, for the states of New York and New Jersey.

GEORGE H. STICKNEY, Po. 1247, who has just been elected president of the Illuminating Engineering Society. Jovian Stickney is connected with the engineering department of the General Electric Company, at Harrison, N. J. He was a charter member of the Illuminating Engineering Society, and served as secretary of the New England Section during the first year of its organization. Since that time he has been very active in its affairs. In addition to his membership in that organization, he is a member of the American Institute of Electrical Engineers, the National Electric Light Association, the American Association for the Advancement of Science, Association of Iron and Steel Electrical Engineers, American Museum of Safety, Engineers' Club of New York, and other organizations of the industry

A. G. Carson, Po. 13999, until recently superintendent of the Eastern Wisconsin Railway & Light Company, Fond du Lac, Wis., has been appointed manager of the company. His headquarters will continue to be at Fond du Lac.

* * * *

R. E. Flower, Po. 13299, formerly with the Louisville Gas & Electric Company, Louisville, and later with the Union Gas & Electric Company, Cincinnati, Ohio, is now with the Erner Electric Company, Cleveland, Ohio.

* * * *

W. A. Wadsworth, Po. 4279, who until recently was in charge of the sales force of the Union Gas & Electric Company of Cincinnati, Ohio, has resigned and is now manager of the Kansas Gas & Electric Company, Wichita, Kan.

* * * *

W. H. Price, Po. 3546, who has been general manager of the Etowah (Tenn.) Water & Light Company for six years, has resigned to accept a position as secretary and general manager of the Crystal Ice & Cold Storage Company of Etowah.

* * * *

M. E. Flaherty, Po. 7177, until recently connected with the Chicago office of the Electric Cable Company, is now with the sales department of A. E. Morrow & Company, manufacturers' agents, 9 South Clinton Street, Chicago, Ill.

* * * *

P. T. Pierson, Po. 12004, of the Stromberg-Carlson Telephone Company, Rochester, N. Y., has been commissioned a first lieu-

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W. N. MATTHEWS, Po. 496-44, Past Jupiter Twelve, president, W. N. Matthews & Bro., Inc., who has been elected president of of St. Louis Chartered League No. 20. Although Jovian Matthews, potential might indicate he had reached an age of austerity and reserve he is still known as "Billy" to his intimate friends and they are numerous. The Jovian Order has not a more loyal supporter, nor one who is more willing to get "into harness" for the cause when the occasion demands. Past Jupiter Matthews' is also chairman of the nominating committee of The JOVIAN Order

tenant in the Signal Corps, and called to active service July 20. He is at present at the cantonment at Belvidere, N. J.

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W. B. MISER, Po. 8941, has been appointed manager of the Drumright (Okla.) Light & Power Company, one of the properties recently acquired by H. M. Byllesby & Company. Jovian Miser was formerly with the Illinois Traction System at Jacksonville, Ill.

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W. J. SQUIRE, Po. 854, manager of the Squire Electric Company, Kansas City, Mo., sustained serious injuries in a dynamite explosion at Leavenworth, Kan., recently. He was visiting his father-in-law, Gov. S. J. Cook, of the Soldiers' Home, at the time.

* * * *

T. G. WHALING, Po. 1381, until recently assistant general manager and sales manager of the Westinghouse Lamp Company, New York City, has been appointed general manager of that company. He continues as sales manager and assumes the executive duties in addition.

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DONALD MCDONALD, Po. 13317, vice-president and general manager of the Louisville Gas & Electric Company, Louisville, Ky., has been appointed chairman of one of the civilian exemption boards in that city, and will pass on the exemption claims of men subject to draft.

* * * *

GEORGE W. ROBINSON, Po. 11853, president of the Tri-State Telephone & Telegraph Company, St. Paul, Minn., has been elected president of the United States Independent Telephone Association, by its board of directors. He succeeds Charles Y. McVey, who recently resigned.

FRED A. OTTO, Po. 6085, president of the Minnesota Electrical Association, who as stated in the May issue of The JOVIAN, was made manager of the Minnesota Gas & Electric Company, at Albert Lea, Minn., has resigned as a result of a recent change in the control of the company.

* * * *

GEORGE H. SAMPSON, Po. 8088, recently tendered his resignation as assistant electrical engineer with C. H. AUSTIN, Po. 7983, Nashua, H. N., to accept the appointment of electrical engineer for the Public Service Commission of New Hampshire. His headquarters are at Concord.

* * * *

M. J. ELGUTLER, Po. 12265, who was until recently city sales manager for the Interstate Electric Company, at New Orleans, has purchased an interest in the Electrical Supply Company of that city. He assumes the management of the selling department of the company with which he has become affiliated.

* * * *

N. L. WALKER, Po. 2950, of the Walker Electric Store, Raleigh, N. C., announces the removal of his place of business to a new location, 108 West Martin, Street One of the novel features of his new quarters, is a complete minature bungalow, in which complete sets of electrical fixtures are displayed.

* * * *

H. W. EVES, Po. 18752, formerly assistant manager of the Chicago office of the Hamilton-Beach Manufacturing Company, and secretary of the Consolidated Manufacturers' Company, recently resigned to become Chicago manager of the Arnold Electric Company, of Racine, Wis. His headquarters are 923 Marquette Building.

* * * *

FRED W. L. FULLERTON, Po. 2921, president of the Fullerton Case Company, New York City, has incorporated his firm under the name of F. L. Fullerton, Inc., and has located at 17 East Forty-Second Street. He will conduct a distributing business, handling lamps, fans. power motors, electric lighting fixtures, vacuum cleaners, etc.

* * * *

HAROLD J. WRAPE, Po. 1081, formerly secretary of the American Carbon & Battery Company, East St. Louis, Ill., has been made manager of the property since its purchase by the National Carbon Company, of Cleveland. The East St. Louis branch is now known as the American Carbon & Battery Works, of the National Carbon Company, Inc.

* * * *

ALBERT MAYER, Po. 4477, of Philadelphia, has recently become associated with the Majestic Electrical Development Company, manufacturers of electric heaters, as eastern sales representative with offices at 1705 Allegheny avenue. The territory covered by Jovian Mayer is the entire section east of Illinois and the Mississippi River, south of that state.

* * * *

JAMES L. STONE, Po. 19724, who was recently elected president of Mansfield (Ohio) Chartered Jovian League No. 19, is now business manager of the Mansfield Electric Light & Power Company. Although a very new member in the Order, Jovian Stone is proving himself a valuable asset to the Mansfield League's membership and to the Order.

* * * *

WALTER CARY, Po. 1363, was recently elected vice-president of the Westinghouse Electric & Manufacturing Company. He was formerly connected with the Westinghouse Lamp Company as vice-president and general manager. Jovian Cary has been associated with the latter company since 1904. Prior to his connection with the Westinghouse Company he was president of the Milwaukee Electric Company.

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HENRY D. SHUTE, Po. 6396, was recently promoted from the position of treasurer to that of vice-president of the Westinghouse Electric & Manufacturing Company. Jovian Shute has been associated with the company since 1893, following his graduation from the Massachusetts Institute of Technology in 1892. He has had a wide experience in the different departments of the company, and is well qualified to direct its affairs.

* * * *

ROBERT E. RAE, Po. 2526, who for the past four years has been sales manager for Stanley & Patterson, New York, and who was previously connected with the Western Electric Company for a number of years, has recently resigned his position with the former company. Jovian Rae has not decided upon a connection for the future, but he will doubtless continue along the selling line or in the work of organizing, for which his experience in electrical supply and manufacturing lines especially fit him.

* * * *

PETER JUNKERSFELD, Po. 10935, assistant to the vice-president of the Commonwealth Edison Company, Chicago, answered the call to the colors June 14. Jovian Junkersfeld, whose military title is major, responded to a call from the Secretary of War on that date. A number of the employees of the Commonwealth Edison Company escorted Major Junkersfeld to the train and presented him with a watch in token of their esteem, when he departed for Washington.

* * * *

SAMUEL LINDSEY NICHOLSON, Po. 3247, who for a number of years has been sales manager of the Westinghouse Electric & Manufacturing Company, has been promoted to the position of vice-president, with headquarters at East Pittsburgh. Jovian Nicholson began his business career with the Belmont Iron Works, in 1887. Since that time he has been connected with the Novelty Electric Works at Philadelphia, the Chadbourne-Hazleton Company of Philadelphia, the Sprague Electric Railway & Motor Company, and later with the Westinghouse Company, in the capacity of sales representative in New York City. In 1904, he was made manager of the industrial department and in 1909, sales manager.

OBITUARY

J. C. PETERSON, Po. 18347, died at his home in Louisville, Ky., after an illness of six weeks. He was a graduate engineer, and before his illness was employed as assistant to the superintendent of construction of the Louisville Gas & Electric Company. He is survived by his wife and parents to whom The JOVIAN extends the sympathy and condolences of the fraternity.

* * * *

W. G. BEE, Po. 7988, vice-president of the Edison Storage Battery Company, Orange, N. J., died at his home in that city July 11. Jovian Bee, was forty-eight years of age and was one of the pioneers in promoting the sale of electrical vehicles. He become associated with the Pope Manufacturing Company of Hartford in 1897, continuing with that firm until the outbreak of the Spanish-American War, when he enlisted in the navy. Some time after his return from the war, he became connected with the Edison Storage Battery Company, with which he remained until his death.

* * * *

B. H. DURBIN, Po. 10301, Statesman from Iowa, one of the best known and most popular of the younger electrical men in that part of the country, was killed in an automobile accident near Pittsburg on the 21st of July. Due to a faulty steering gear, the machine in which his party was driving to the country club, went over an embankment, killing Mr. Durbin instantly and severely injuring the other occupants of the car.

For the past five years Mr. Durbin has been connected with the Bryan Marsh Division, National Lamp Works of the General Electric Company, traveling out of their Kansas City office. We are sure his many friends throughout Colorado, Nebraska and Iowa will feel the loss keenly as in his work he was a true disciple of good cheer and fellowship.

* * * *

ANNUAL MEETING AND ELECTION OF OFFICERS
PENNSYLVANIA N. E. C. A.

DELEGATES to the annual convention of the Electrical Contractors' Association of Pennsylvania convened at the Hotel Adelphia in Philadelphia, June 19. After the meeting was opened, Washington Devereux, Po. 2367V, chief of the electrical department, Philadelphia Fire Underwriters' Association delivered an instructive address on the careless practices in the use of electrical appliances in many homes, and the great number of fires that have been caused by neglect. Jovian Devereux set forth that the fires were not caused by any defect in the devices, but by carelessness in their use.

Other speakers at the meeting were M. Edwin Arnold, Po. 2365; Joseph B. McCall, Po. 17933; Charles M. Ripley; H. W. Alexander, Po. 17191, statesman-at-large; John M. Hoolye and Frank H. Stewart, Po. 530V.

The following officers and directors were elected:

President, Albert Gentel, Po. 2769; vice-president, H. F. Hartmen; national director, George E. Shepherd.

* * * *

JUNE REJUVENATIONS
HOPEWELL, VIRGINIA

FIRST Tribune, W. T. Evans, Po. 14939, held a Rejuvenation on the House Boat Charlette, at Hopewell, on the evening of June 21. Three candidates were initiated under the modified form of initiation ceremony.

After the Rejuvenation a banquet was served and the members and candidates enjoyed a pleasant evening.

* * * *

DALLAS, TEXAS

THE Municipal Auditorium was the scene of the Rejuvenation held at Dallas, Texas, on the evening of June 2. Thirty-four members were in attendance to participate in initiating two candidates. There was no Joviation or banquet held in connection with the affair. The work of the Degree Team was enjoyed by those present, and the team deserve much credit for the inspiring manner in which the ceremony was performed.

Following are the members of the team: C. G. Matthews, Po. 10662, Jupiter; W. L. Dowell, Po. 12090, Neptune; G. H. Preston, Po. 19792, Pluto; J. E. Coad, Po. 12082, Vulcan; R. W. Snyder, Po. 8566, Mercury; F. B. Shannon, Po. 12132, Hercules; J. H. Gilbert, Po. 7076, Mars; E. G. Warner, Po. 15039, Apollo, and Robert Campion, Po. 12079, and G. A. Coffey, Po. 9596, Imps.

* * * *

ELIZABETH, N. J.

FIRST Tribune, W. E. Fey, Po. 10120, of Elizabeth, N. J., surmounted the difficult conditions of war excitement in the East and held a Rejuvenation at Shrague Hall, Elizabeth, N. J. There were six candidates present to receive the initiation. Prominent among them were Max P. J. Nemmert, superintendent, Diehl Mfg. Company and James G. Orr, district commercial manager, New York Telephone Company.

The Joviation was held at Thomas' Cafe, C. A. Howlett, Po. 279, presided as toastmaster, introducing as speakers, H. C. Heidt rich, Po. 14439, statesman for New Jersey and W. J. Miller, Po-17927.

The degree team: H. N. Radford, Po. 16444, Jupiter; H. C. Heidrich, Po. 14439, Neptune; S. F. Stewart, Po. 5692, Pluto; W. T. Georges, Po. 1735, Vulcan; W. E. Fey, Po. 10120, Mercury; H. J. Hornung, Po. 5370, Hercules; W. J. Miller ,Po. 17928, Mars; H. J. Hornung, Po. 5370, Apollo, and C. H. S. Howlett, Po. 279, Avrenim.

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DEFINITIONS OF MILITARY TERMS AS GIVEN RECENTLY BY THE ASSOCIATED PRESS

IN THESE times of war, when frequent reference is made to matters of a military nature an accurate knowledge of terms is essential to proper expression both in conversation and correspondence. The following definitions given by the Associated Press should be of great assistance in that respect.—Editor.

A corps is two or more divisions commanded by a major-general.

A division is composed of two or more brigades, also commanded by a major-general.

A brigade, commanded by a major-general, is composed of two or more regiments and independent companies or battalions.

A regiment of infantry consists of twelve line companies and three additional companies. It is commanded by a colonel, with the following additional officers: one lieutenant-colonel, three majors, fifteen captains as company commanders, three of them also being members of the colonel's staff as adjutant, quartermaster and commissary; two lieutenants to each company, one lieutenant acting on each of the three major's staff.

A battalion is made up of four companies and is commanded by a major.

A company of infantry consists of 150 men divided into two platoons; platoons are divided into squads. A platoon is commanded by a lieutenant—a commissioned officer; two or more squads are commanded by a sergeant; a squad is commanded by a corporal and comprises seven men besides the corporal.

A company of cavalry is called a troop and a battalion of cavalry is called a squadron.

A company of artillery is called a battery. It is divided into sections and there may be different numbers of guns, according to the kind of artillery.

Three batteries of artillery make a battalion.

The word "company," "troop" or "battery" should not be used before the letter as "Company B." It would be the same as to say "Street Jackson." The letter comes first as the numeral comes before the word regiment: "Second regiment." Not Regiment second.

Troops are either Federal (regular) or National Guard. Every male citizen of the United States between the age of 18 and 45 is a member of the militia. Never use the word when referring to organized bodies of troops.

There are no such things as "militia officials" or "army officials" in military parlance. They are National Guard and army officers.

A skirmish, engagement, brush, fight or encounter is not a battle.

A battle is an engagement for the possession of a certain point that is general in character. Large bodies of troops are engaged—more than a brigade. Otherwise the fight is an engagement skirmish or an encounter.

Never say "Captain Jones and his soldiers of Company A." Say "A company commanded by Captain Jones," and so and so.

Any irregular body of troops less than a company, or troop, is called a detachment, unless it is a platoon or squad or a section of artillery. Never say "Lieutenant Jones and a number of men" from such and such an organization. Say "A detachment from A company, commanded by Lieutenant Jones."

Ammunition is spoken of in terms of rounds. "Fifty-rounds" means 50 cartridges—50 shots.

Never say muskets. There are not any. Artillerymen carry pistols and not revolvers.

Troops generally move in columns. The usual column is four men abreast—two ranks comprising a squad with the corporal as the man on the left in the front rank. They go into the firing line in "extended order"—sometimes referred to as a skirmish line. Troops are sent into battle or engagement as the firing line, the support and the reserve. The tactical unit in the line of battle or engagement is the battalion.

A picket consists of several men—generally a squad. One of a picket is a sentinel or sentry. In front and on the flanks of all troops in camp are outposts—pickets. All troops doing guard duty, picket duty, outpost duty, etc., are commanded by "the officers of the day," so designated for a period of twenty-four hours as are the troops on guard duty.

Troops carry "ponchos"—rubber blankets; not raincoats or raincapes. Mounted troops and drivers are equipped with "slickers."

A bayonet is kept in a scabbard.

A rifle or carbine is loaded with a clip.

Fatigue duty refers to work to be done about camp.

A camp is "policed" when it is cleaned up—rid of rubbish and the like.

A cavalryman is called a "trooper."

A recruit is not a "rookie," unless you want to use slang. The phrase "new recruit" is redundant.

Troops are "mustered" into the service and out. Also they are "mustered" each month for the benefit of the paymaster—that he may know whether or not dead men are drawing pay.

The insignia of United States officers designating rank are as follows:

Second lieutenant—brown braid on cuffs—gold-black hat-braiding and U. S. on collar; leather leggings.

First lieutenant—one bar on shoulder; other insignia corresponding to second lieutenant.

Captain—two bars on shoulder.

Major—gold leaf on shoulder.

Lieutenant-colonel—silver leaf on shoulder.

Colonel—silver eagle on shoulder.

Brigadier-general—one silver star on shoulder.

Major-general—two silver stars on shoulder.

Lieutenant-general—three silver stars on shoulder.

Full general—four silver stars on shoulder.

All grades wear brown braid on cuffs, gold-black cord on hats, leather leggings and U. S. on collar.

The insignia worn by the various branches of the service are as follows:

Infantry—two crossed rifles.

Cavalry—two crossed sabers.

Artillery—Mercury wand with entwined snakes.

The designating colors for each branch are: Infantry, blue and white; cavalry, yellow; artillery, red; medical corps, maroon.

NOTE—"Leggings" is also spelled "leggins," and the latter spelling is becoming popular.

Speaking of Dividends — isn't three hundred per cent a pretty fair return on the investment? That is just what a single Accident Policy under the Jovian plan means to members, and remember that is only the minimum—more than a thousand per cent is possible. Read pages 18 and 19 for particulars showing how this is possible.

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ST. LOUIS JOVIAN LEAGUE EXCURSION—BIG SUCCESS—NEW OFFICERS OF LEAGUE ELECTED

PROBABLY the most enjoyable affair held by the St. Louis Jovian League since the convention of 1914 was the excursion aboard the Steamer Alton, Friday evening, July 20. That the excursion was a success from every standpoint is certain. In round numbers about fifteen hundred people—Jovians, their families and friends were in attendance, and a more congenial crowd of people would be hard to assemble.

As to the arrangement and management of the affair it is doubtful if it could have been handled in a more perfect manner. The entertainment features were exceptionally good, the contests were spirited and the distribution of prizes aroused a great deal of interest.

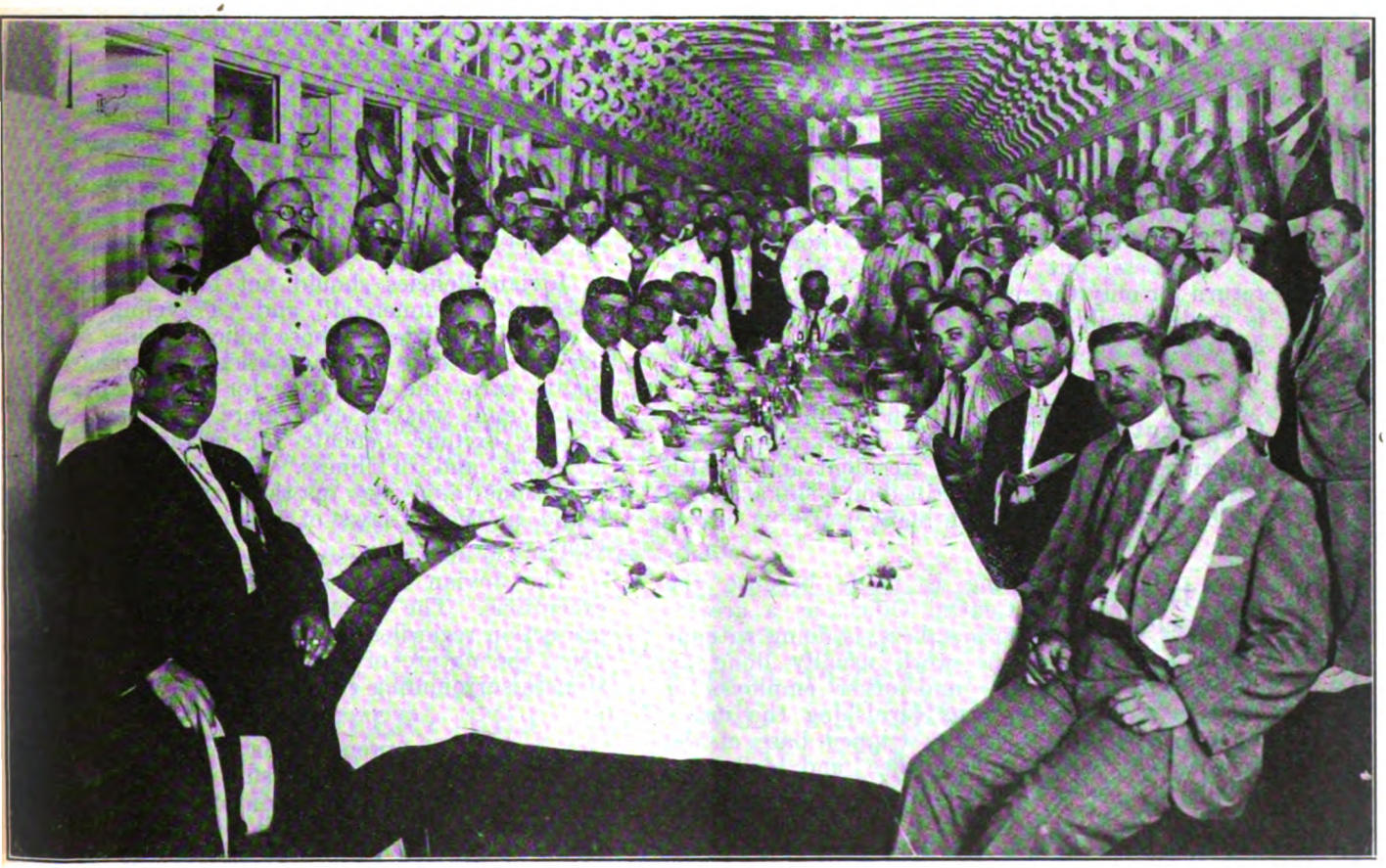
The event marked the retirement of E. H. Waddington, Po. 5176V, as chairman of the entertainment committee of the St. Louis League, and he and his committee put forth their best efforts to make it the success it proved to be.

From the tap of the starting bell until the stage-plank was lowered at the conclusion of the trip there was "something doing" in the way of entertainment every minute of the time. There were quartettes, Hawaiian musicians, a minstrel troupe, singers and dancers performing, dancing contests, distribution of prizes and the banquet "performance" in which the losing ticket-selling team attired as "regular" waiters served the winning team.

Naturally the distribution of prizes aroused a great deal of interest. There were over $500 worth of household appliances contributed by local electrical firms and members of the League, and to C. E. Mishel, Po. 9061, chairman, Fred B. Adam, Po. 242V, Phil Ziegenfuss, Po. 11781, and T. K. Stevenson, Po. 11018, members of the prize committee, is due much credit for collecting them.

While the large attendance must be considered in a great measure as a tribute to Jovian Waddington for the splendid manner in which he has handled the entertainment affairs of the League during the past three years, much credit is also due the two ticket-selling teams for their work. These two teams were designated "The Recruiters" and "The Conscriptors" headed respectively by Fred Johnson, Po. 177V, and E. C. Johnston, Po. 18535, and developed a spirited contest that resulted in victory for the "Conscriptors." They were awarded a banquet abroad the boat, which their rivals, "The Recruiters," were compelled to serve as waiters.

At the executive meeting, the following officers of the League were declared elected to serve for the ensuing year: President, W. N. Matthews, Po. 496-44V, Past Jupiter Twelve, president, W. N. Matthews & Bro., Inc.; vice-president, E. H. Waddington, Po. 5176V, sales manager, Western Electric Company; secretary-treasurer, George McD. Johns, Po. 9052, superintendent, Fire and Police Telegraph Department, City of St. Louis; executive committee, Bruce Cameron, Po. 10790, superintendent transportation, United Railways; Charles S. Ruffner, Po. 9955, vice-president, The Electric Company; F. N. Boyer, Po. 1176, General Electric Company; and Horace W. Beck, Po. 9617V, secretary, Light & Development Company.



Here they are: "Conscriptors" and "Recruiters," all ready for the big banquet aboard the St. Louis Jovian excursion. The diplomatic food-dispensary service of France never produced better mustaches and goatees than adorned these Jovian waiters. Could they wait? That was just the troube. They waited too long in the ticket-selling contest and so they had to serve the "Conscriptors" the banquet they won. It was a great frolic

Seated from left to right, around the table: C. E. Michel, Po. 9061, George S. Watts, Po. 15787, J. P. Casey, Po. 790, James S. Warren, Po. 10807, W. J. Delaney, Po. 11580, Chester F. Crowley, Po. 12780, L. H. Keller, Po. 10500, J. H. Brown, Po. 16747, R. C. Kellogg, Po. 19714, E. C. Johnston, Po. 18535, chairman; Fred B. Adam, Po. 242V, F. O. Grayson, Po. 1014, R. E. Stewart, Po. 11738, J. F. Kidd, Po. 3233, Jules A. Baker, Po. 18518, vice-chairman; W. R. Joyes, Po. 13813, and A. G. Werner, Po. 5776

Standing left to right: E. E. Woodbury, Po. 14484, Ralph E. Perry, Po. 8850, W. J. Musser, G. H. Cohn, Po. 6630V, T. S. Hardy, Po. 9938, Horace E. Fritschle, Po. 9629, R. C. Houck, Po. 798, Isaac Elkas, Po. 9931, T. P. Gleeson, Po. 795, E. H. Waddington, Po. 5176V, chairman Entertainment Committee; George W. Piekson, Po. 12317V, Michael O'Brien, Po. 9064, G. L. Gamp, Po. 15664, and T. R. Fowler, Po. 16752

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Speeding

FOR TH

An Aeroplane View o

What It Does The plan provides Jovians with Accident and Health Insurance at approximately one-half the cost of such protection through any other source.

Amount Saved A minimum saving of $13, or a maximum saving of $41, is made upon each transaction, the amount depending upon the quantity of insurance written.

Who Receives The Saving The Jovian Central Office, Jovian Officers and Local Chapters do not receive any compensation whatsoever in connection with Jovian Insurance. The entire amount paid by the insured goes to the insurance company, and the members are given advantage of every cent of saving; therefore, the Order is not SELLING something to its members, but is delivering a SERVICE in return for only the regular dues. This SERVICE is made possible by the increase in Jovian dues from $2 to $4.

Combinations There are five different ways of applying the plan, thus covering the entire field of Accident and Health Insurance. These are described on a slip attached to the enclosed application blank.

How The Saving Is Made The saving is made because the Jovian Central Office, as a greater service to members, is doing without charge the work usually done by agents and sub-agents and other employes of insurance companies, thus furnishing the insurance to Jovians at a cost stripped bare of the expense of commissions, office and collection detail.

The Company Writing The Insurance The company writing the insurance (Employers' Indemnity Corporation) is sound financially (it has a larger porportionate surplus for the protection of policy holders than any of the large accident companies), and has a splendid record of fair dealing and prompt, equitable adjustment of claims.

Who Can Purchase The policies can be obtained by only Jovians in good standing: no other organization or individual can be served with this policy. Jovians not in good standing (delinquent, dropped or resigned) can secure the policies after reinstatement.

Comparison With Other Policies This is NOT "fraternal" insurance. Fraternal insurance may appear low in cost, but such cost is unstable because of the possibility of additional assessment. No additional payment or assessment is possible with the Jovian Policies.

Jovian Policies should not be confused with so-called "Commercial" and "Traveling Men's" association policies. Those policies, while appearing low priced to the inexperienced purchaser, in reality carry the obligation for additional assessment; and, what is even more important, those policies exclude benefits for certain classes of accidents and of illness. The exemptions and exceptions applying to those policies, can be found in the by-laws of the respective associations.

The Jovian Policies have no exemptions or exceptions. The Jovian Policies furnish complete protection regardless of the character of the accident, the nature of the illness, and the circumstances surrounding either.

Payment The premium on Jovian Policies can be paid in one sum or in partial payments, within the discretion of the purchaser. The first payment need not be made until the policy is received by the purchaser.

The Policies The Jovian "Single Accident" Policy costs $12. The principal sum is $5,000; the policy carries the usual cor-

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the Story

BUSY MAN

the Big, New Benefit

responding benefits for death, loss of sight and dismemberment; also, double indemnity provisions; total disability $25 per week; partial disability $10 per week; emergency medical attendance and identification benefits, and elective benefits. The Standard Provisions are identical with those appearing in policies issued by the foremost companies. In short, the Jovian "Single Accident" Policy at $12 is substantially the same as the $25 policies sold by the largest companies.

The Jovian "Double Accident" Policy costs $24. This policy has a principal sum of $10,000, and likewise in all other provisions provides for double the benefits of the "Single Accident" Policy. It is, therefore, for $24 substantially DOUBLE the value of policies issued at $25 by the foremost accident companies.

The Jovian "Health" Policy costs $20 and is substantially the same as the $35 health policies issued by the large companies. This policy provides $25 per week during illness and the period of convalescence, with provisions and other benefits equally as liberal as those of the Jovian Accident Policies. This policy covers every character of illness without one single exception.

Special Benefits A Jovian Board is authorized to be appointed each year by Jupiter to hear any question of settlement that may by any possibility be other than entirely satisfactory to the insured.

Each policy holder is presented with a handsome key chainlet with identification disk attached; provision is made to care for any policy holder who may be injured and is identified through this means.

REMEMBER!

We are not trying to SELL you something. We are offering to accomplish a valuable service for you.

Every cent of the saving made through this new Jovian plan is given to the members. Not one penny is paid to or retained by The Jovian Order, its central office, its local chapters, or any of its officers for the costly and effective service they are rendering to produce and operate this proposition.

It is The Jovian Order's fulfillment of its promise to deliver a greater, tangible, direct-to-the-member benefit in consideration of the increased dues.

IF YOU FEEL AS THOUGH YOU MUST HAVE FURTHER DETAILS, YOUR REQUEST WILL BRING THEM PROMPTLY, BUT, HERE IS A **SPECIAL OFFER:** FILL OUT AND RETURN THE ENCLOSED APPLICATION NOW AND YOU WILL RECEIVE ONE MONTH'S FREE INSURANCE (ACCIDENT, HEALTH, OR BOTH).

IF YOU SO DESIRE, DATE YOUR APPLICATION TO TAKE EFFECT WHEN SOME OF YOUR PRESENT INSURANCE EXPIRES — PAY NOT UNTIL YOU RECEIVE THE POLICY.

THE JOVIAN ORDER

SYNDICATE TRUST BUILDING ST. LOUIS

EVERY DOLLAR YOU INVEST IN JOVIAN INSURANCE RELEASES NEARLY ANOTHER DOLLAR FOR YOUR OTHER PRESSING NEEDS.

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

Biga Da Slack

By W. R. J.

Toney Gavetta, who sells da banan',
Claima dat he ees a 'merican man;
All da time tell he ees goin' to fight,
Makes a beeg speech mos' ev'ra night.
Talka too much—maybe so, maybe not?
Anyhow he talka a mighty beeg lot.
Man from da bank axa Toney for mon';
Taka a heep if da war ees won.
Toney he tell heem what poor man he ees,
Can not geeve any to help da war beez—
Giva nothin'!

Some time he tell how da poor soldier lays
Seeka an' creeple for four—seven days;
Maybe done loosa hees han's an' hees feet,
Don't gotta nothin' to drink nor to eat.
Talka to me an' he talka to you,
All da time tella us what ees to do.
Fina da girl, hav' a cross on da sleeve,
Axa of Toney how mucha he geeve
To help, an' Toney he talka so sad;
Tella da lady hees bees'ness ess bad—
Giva no mon'!

Mucha time talka he slapa hees ches'
Tella what kind of a soldier ees bes'.
Alla time tells how to shoota da gun—
I'm betcha hees life he maka dem run!
Talka to me an' pounda hees fist;
Tella me why I don't go up an' 'list.
A soldier he ax eef he's 'merican;
Saya to Toney, "you make a fine man,"
An' Toney he getta all white so queek;
Tella da man he ees alla time seek—
Biga da slack!

* * * *

Observations of Controlling Influences

"EXPERIENCE"

EXPERIENCE is that factor of knowledge imparted to the human mind by the steam-roller of practice.

It has been stated after thorough investigation that an ounce of experience carries a greater punch of conviction than a gallon of printer's ink. The author of this estimate was a gentleman who read an eleven-page treatise on the flavor of quinine and then tasted it.

The fundamental principle of experience is to leave warning signals on the mental faculties as reminders of what happened. These signals act somewhat similar to torpedoes on a railroad track. When we strike one it reminds us of the jolt we got just around the curve when we passed along that way before.

Although experience has been pronounced a great teacher, there are numerous instances on record to show it has often been very ineffective in delivering its punch. Pictures of our ancestors show that the race came down a long way from Adam tramping on their whiskers before they discovered they could voluntarily amputate them and still live, although the same records disclose the fact that a number of them got theirs chewed off by the beasts and others were deprived of their incumbrances in combat by their fellow man.

It is claimed by the ancients (they must have been very ancient to know anything about it) that the inhabitants of the earth acquired the habit of sleeping, because they got scratched and bruised preambulating around in the dark. Although the lightning bugs set them a good example, after they stubbed their toes a few times they acquired the habit of crawling in a cave and lying still at night, and caught the infection before they took the tip and started to make torches to see by.

However, it seems experience will get in its work sooner or later. A good illustration of this assertion is contained in the experience of an individual who attempted to enter an edifice, from which issued sounds of revelry, one evening.

At the first attempt he was led out, the second time he was pushed out, the third time he was kicked out, and upon entering the fourth time he was hurled out upon his head. Arising he remarked to a bystander that he had gained the impression he was not wanted within.

So it would seem that the value of experience does not manifest itself so much in having it, as it does in observing what it does to you, what the source that generates it is likely to do again, and in promoting enough activity on your part to cause you to get yourself in the clear when you observe it hanging around in your vicinity on another occasion.

* * * *

The Evening Song

By W. R. J.

GATHER'D in the music room when the day
is done,
There a winsome feeling seems to gently
run
Through the whole surroundings like the
beams that play
O'er the rippling surface of a moon-lit
bay.
As the wand of harmony waves above each
heart,
One by one the cares of day silently
depart.

Like a placid harbor in the evening
song;
Where the troubled spirit seeks respite
from wrong.
All the storms of conflict that the day
have fill'd,
All the bitter pangs of strife by its notes
are still'd,
And the weary yearning for content's
domain
Finds a peaceful harbor in the song's
refrain.

* * * *

A Tip or Two

There does not appear to be any point of exact balance in life; the see-saw is either going up or down all the time. People who imagine they are perfectly poised are pretty sure to be slipping.

* * * *

Some people estimate their superiority by the amount of wealth they possess, others by their ancestry and still others by their accomplishments. Then there are a few who are too busy accomplishing things to think whether they are superior to other people or not. Which class has your verdict.

* * * *

That all work and no play makes Jack a dull boy is true is hardly to be doubted, but there are numerous instances on record where the idea would be benefited by a little recreation.

* * * *

A lot of people who are looking for "a chance" imagine it is going to come along labelled and tabulated, with directions attached for starting and operating.

* * * *

There are two bad sets of good intentions; those which are abandoned before completed and those which are never applied at all.

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NEWS OF JOVIAN LEAGUES

Chicago A. R. Brunker's address delivered before the Chicago League, June 7, was one that contained a message for every citizen of the country. He showed conclusively that America's greatest need at the present time was to be aroused to the seriousness of the situation confronting the country, and that we are engaged in the greatest conflict of all time.

President H. A. Mott, Po. 17507, turned the meeting over to Vice-president Geo. H. Jones, Po. 12259, who took occasion to compliment the speakers' committee and particularly the chairman, B. E. Blanchard, upon the exceptionally fine program with which the league had been furnished since January 1.

H. V. Coffey, H. L. Ruggles and Homer E. Niesz, Po. 306V, Past Jupiter Thirteen, spoke on the desirability of the League investing in the Liberty Loan. A motion was passed by unanimous vote, authorizing the secretary-treasurer to arrange for a subscription of $1,000 worth of bonds.

J. N. Pierce, Po. 1598, outlined briefly his plans for the annual outing. A fund of $300 was authorized to be advanced to meet the expenses of the committee.

H. A. Porter, Po. 1244, who had recently been appointed Custodian of the club's miscellaneous property, made a plea that all members having property belonging to the club turn it over to him that he might have something to "custode."

* * * *

Louisville, Ky. The third annual boat ride was held by the Louisville Jovian League on the Steamer Pilgrim, June 26. The boat left the wharf at Louisville at 8 p. m. with about 600 Jovians, their families and friends aboard.

One of the most interesting features of the excursion was the distribution of electrical prizes. These prizes ranging from vacuum cleaners to toasters were donated by the local electrical concerns. There were twenty-five in all and a great deal of interest was aroused by their distribution.

Other enjoyable features were the splendid music furnished by the orchestra, and dancing.

The affair was considered a success both from a financial and social standpoint, and the members of the committee in charge are to be commended for their efforts in making it so. They are: W. D. Meyers, Po. 13322; E. B. Allen, Po. 15489, and A. G. Renau. The committee was given able assistance by F. V. Gantt, Po. 12526, president of the Louisville League.

* * * *

Cleveland Ward Harrison, Po. 8898, illuminating engineer for the National Lamp Works, addressed the luncheon meeting of the Cleveland League, June 17. His address was accompanied by a number of interesting demonstrations.

In a short address, George Miller reported a great deal of favorable comment from outside sources complimenting the League on its activity in promoting the sale of Liberty Bonds. J. L. Mauldin suggested that an information file, indicating the lines of products handled or manufactured by League members be added to the club records. Fred Ripley announced that from the amount of favorable comment he had heard, the attitude of friendliness exhibited toward guests was greatly appreciated.

June 20 was Red Cross day. J. Robert Crouse, Po. 260-8V, Past Jupiter Seven, presided as chairman.

Talks were made by the Rev. M. H. Lichliter, F. S. Ferry, William G. Rose and J. M. Bateman, Po. 2610V, president of the League.

* * * *

Oklahoma City At the weekly luncheon of the Oklahoma City League held at the Lee-Huckins Hotel, June 18, the members voted to donate the entire proceeds of the base ball game to be played June 23 at Saratoga Park, to the Red Cross. The Jovian Team which is a member of the Oklahoma City League has lost but three games this season and stands at the head of the league. The proceeds of the game amounted to $48.83.

H. H. CUDMORE, Po. 196V, Tenth Mars, who after ten years' service with the General Electric Company, has resigned his position as department manager of the Mazda lamp sales for that company to take charge of the distribution of the Oscar Sheck lamp appliances for the Argus Lamp & Appliance Company of Cleveland. One of the important fields of distribution to be covered by Jovian Cudmore is that of motion pictures. The Sheck Universal adapters adapt carbon arc equipment to the use of Mazda projector lamps without alteration or change. Another field is that of stage lighting. Inventions of the company adapt carbon lights to the new Mazda types, a change that it is predicted will revolutionize the lighting of stages and theatrical productions. Jovian Cudmore has many warm friends in the fraternity and in the business world and in extending "best wishes" for his success in his new work. The JOVIAN feels it is conveying the sentiment of the fraternity to which he has rendered loyal and valuable service

Canton, Ohio The Stark County Jovian League held a banquet and smoker at the home of Siebenburger Sachsen, on Willow Street, Alliance. There were forty members from the towns of Canton, Alliance, Massillon, New Berlin and Warren present to participate in the festivities.

W. J. Rose, Po. 10595, presided as toastmaster.

O. A. Acuff, Po. 10590, First Tribune, and president of the League made an appeal for popular support of the project to light the Lincoln Highway.

The question of the members supporting the Liberty Loan was taken up by Toastmaster Rose and a motion was carried by unanimous vote that the members of the League give their united support to aid in the sale of bonds.

* * * *

Dallas, Texas C. S. Dawley gave an educational talk before the Dallas Jovian League, June 18.

On July 2 the League voted to discontinue its regular meetings until the third week in September.

A novel method of making future attendance at the luncheon meetings compulsory was discussed at some length at the meeting.

* * * *

Los Angeles The meeting of June 20 was the "Grand Finale" of the season for the Los Angeles Jovian League. Professor Tully Knoles, head of the Department of History, University of Southern California was the speaker of the day, taking for his subject, "The Basis of American Patriotism." Charles Heston Peirson, Po. 17078, was poet laureate of the occasion, contributing a few stanzas entitled "Jovians," in which he set an idealistic standard for members of the fraternity to attain.

* * * *

St. Louis The last meeting of the St. Louis Jovian League, June 20, brought a large crowd to the dining room of the Mercantile Club.

J. W. Booth, advertising manager of the Missouri Pacific Railroad Company, was the prin ipal speaker, and took for his subject, "What the Missouri Pacific Railroad means to St. Louis."

E. A. Chenery, Po. 9028, superintendent of telegraph lines of the Missouri Pacific System, presided as chairman of the meeting.

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A. C. CORNELL, Po. 5756, First Tribune, salesman specialist for the Western Electric Company, St. Louis, Mo., has been appointed sales manager of the Denver branch of the Western Electric Company. Jovian Cornell has been an active worker for the Order for a number of years and gained a great deal of distinction by his masterful portrayal of the part of Avrenim on the St. Louis Degree Team. He carries the best wishes of a host of friends to his new position. In extending congratulations The JOVIAN feels confident in predicting that success will attend his efforts in his new field

After Mr. Booth's instructive address a number of reels of interesting scenery along and adjacent to the railroad was shown.

Announcement was made that the annual excursion of the League would be run July 20, and that announcement of the two teams selected to compete in the ticket selling contest would be made within a few days. Chairman and vice-chairmen of the teams which were designated "The Recruiters" and "The Conscriptors," were later announced. They are:

"Recruiters," Fred Johnson, Po. 177V, Chairman; T. Paul Gleeson, Po. 795, vice-chairman. "Conscriptors," E. C. Johnston, Po. 18535, chairman, Jules A. Baker, Po. 18518, vice-chairman.

* * * *

W. N. MATTHEWS & BRO. MOVES CHICAGO OFFICE OF THE FIRM

Chicago offices of W. N. Matthews & Bro, located at 507 South Clinton Street for the past sixteen years, have been moved and are now located at Room 400, Lees Building, 19 South Fifth Avenue. The new quarters are more centrally located and convenient for the firm's customers.

CHICAGO LEAGUE HAS SPLENDID OUTING AT THE DUNES

THAT the annual outing of the Chicago Electric club—Jovian League, held at the Dunes, Thursday, July 19, was an event greatly enjoyed by Jovians, their families and friends to the number of one thousand who attended has been enthusiastically attested. While the success of the outing is directly attributed to the splendid program and the management of the various committees, the novelty of the change from Raviania Park to the Dunes aided materially in arousing interest in the affair.

The greatest amount of interest was evidenced in the contests that had been arranged. Starting with a three-legged race for boys, at 11:30 a.m., there were events of such a varied nature that almost every one could compete in some one or more of them.

Following that contest there were: A backward race for girls under 14; a Dune roll race for boys, under 18; a sand crawl for boys and girls under six; a fifty-yard dash for girls under 14, a shoe race for boys and girls under nine.

Then followed an intermission for lunch.

In the afternoon the crowd assembled to listen to an interesting address on "The Dunes" delivered by Jens Jensen; after which the contests were renewed.

Starting with a 25-yard swim for boys under 18; there followed a 50-yard swim for boys over 18; golf contests; water race for girls; a tug of war for boys and girls and a contest for the cleverest bathing suit for girls over 18.

About the only disappointment of the day was the bad luck of the fishermen. When the big nets were drawn in there was not a single "flapper" to gladden the hearts of the big crowd that had congregated to see the big "catch."

Aside from that one feature the program was a complete success, and as poor luck at fishing may be charged to weather, wind or tide, everybody took it good naturedly and were happy just the same.

Following are the chairmen of the various committees in charge of the outing:

J. N. Pierce, Po. 1598, general chairman; G C. Keech, Po. 10938, transportation; L. H. Lamont, Po. 10947, gold; G. W. Lunn, Po. 17482, souvenirs; C. W. Forbrich, Po. 10162, publicity; W. M. Goodrich, Po. 2658, beach sports; H. G. Hafner, Po. 10921, swimming; W. C. Perry, Po. 10872, music; R. I. Phillips, Po. 1091, grounds; C. W. PenDell, Po. 3253, games; H. A. Mott, Po. 17507, co-operation; Paul W. Koch, Po. 10943V, ticket sales; Robert Kline, Po. 17354, wheel of fortune; L. C. Jones, Bowling; G. A. Harter, Po. 1229, advertising; W. E. Bischoff, Po. 3190, refreshments and George B. Johnson, Po. 1787V, prizes.

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PRACTICAL LESSONS IN ELECTRICITY

LESSON TWENTY-EIGHT

WHAT "REACTANCE" AND "IMPEDANCE" REALLY MEAN

By TERRELL CROFT

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OHM'S LAW really applies to all alternating-current circuits as well as to all direct-current circuits. But the method of its application to certain alternating-current circuits involves a somewhat tedious, though not complicated, process. First, it will be shown in a general way why this (that Ohm's law always applies) is true; then a numerical example illustrating the truth will be recited.

With a direct-current circuit:—$I = E \div R$, where I = current in amp., E = e.m.f. in volts which impels I; in the circuit and R = resistance in ohms of the circuit. Note particularly that *E = e.m.f. in volts which impels I;* this E is not necessarily the e.m.f. or voltage impressed on the direct-current circuit. If there is a source of counter e.m.f. in the circuit, the voltage E which impels the current will be:—*Impressed Voltage Minus Counter Voltage.* That is, where there is a counter e.m.f. in the circuit, the *available, net or active voltage* is something less than the impressed voltage. The available voltage which actually forces current through a direct-current motor armature which is turning, is the voltage impressed on the motor minus the counter e.m.f. induced in the motor armature due to its rotations. In many—in fact, probably in a majority—of direct-current circuits there is no source of counter voltage; hence, for a majority (but not for all) of direct-current circuits, *the current equals the e.m.f. impressed on the circuit divided by the resistance of the circuit,* because in these cases where there is no counter e.m.f. the available or energy e.m.f. must necessarily be the impressed e.m.f.

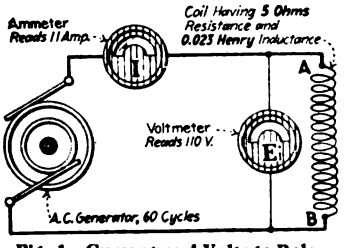

Fig. 1—Current and Voltage Relations in a Circuit Having 5 Ohms Resistance and 0.002 Henry Inductance

Precisely the same general situation obtains in regard to the application of Ohm's law with alternating as with direct-current circuits. The current in an alternating-current circuit equals the available (active or energy) e.m.f. divided by the resistance of the circuit. And to determine the available e.m.f. in any circuit, any counter e.m.f. developed in the circuit must be subtracted from the e.m.f. impressed on the circuit—just as with direct-current circuits.

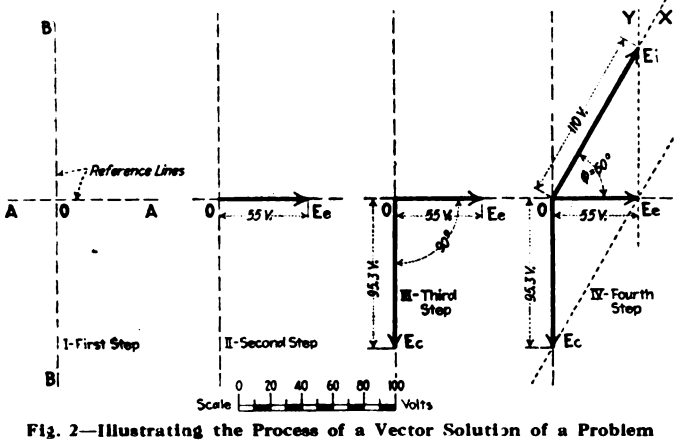

Fig. 2—Illustrating the Process of a Vector Solution of a Problem

The current in an alternating-current circuit containing resistance only is equal to the e.m.f. impressed on the circuit divided by the resistance. The reason why this rule is a true one is that no counter e.m.f. is developed in an alternating-current circuit containing only resistance. Hence, in such a circuit the impressed e.m.f. is the available or energy e.m.f. But if there is permittance (capacitance) or inductance in an alternating-current circuit, each, when current flows, exerts a counter e.m.f. which opposes the impressed e.m.f. Hence, to obtain the value of the available or energy e.m.f. (the e.m.f. which is actually serviceable in impelling current) in an alternating-current circuit the counter e.m.fs., if there are such, developed, due to inductance or to permittance, or to both, must be subtracted from the impressed e.m.f.

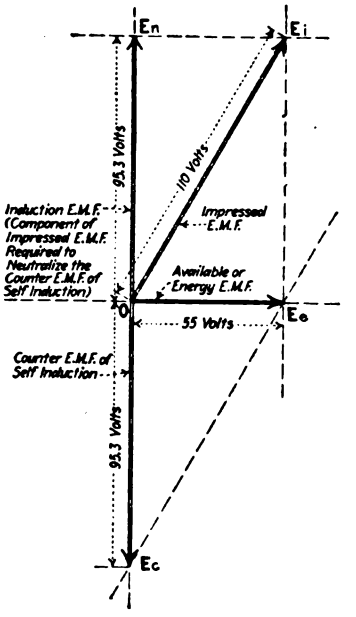

Fig. 3—Phase Diagram Illustrating Induction Component of Impressed e.m.f.

In direct-current circuits the counter e.m.fs.—if there are such—are in phase with their impressed e.m.fs.; hence, to obtain the net e.m.f. in a direct-current circuit the counter e.m.f. is subtracted arithmetically from the impressed e.m.f. But in alternating-current circuits, the counter e.m.fs. of self-induction and of permittance are not in phase with the impressed e.m.f. That is, the counter e.m.fs. of inductance and permittance do not attain their maximum values at the same instants as those at which the impressed e.m.f. attains its maximum values. It follows that, to obtain the net—available—e.m.f. in an alternating-current circuit containing inductance or permittance the subtraction of the counter from the impressed e.m.f. cannot be made arithmetically. It must be made vectorially and the phase relations between the e.m.fs. concerned must be given due considera-

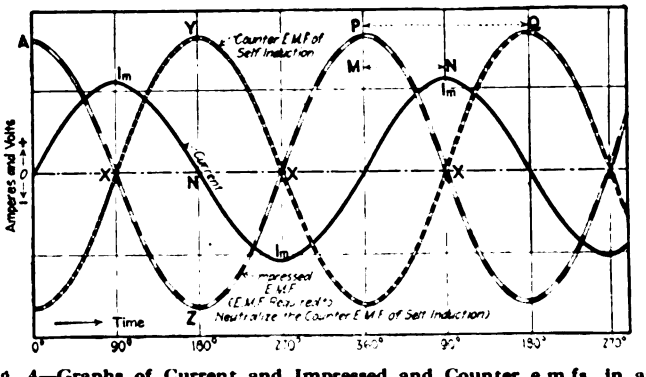
Counter E.M.F. of Self Induction
Im
Current
Amperes and Volts
Impressed E.M.F. (E.M.F. Required to Neutralize the Counter E.M.F. of Self Induction)
Time
0° 90° 180° 270° 360° 90° 180° 270°

Fig. 4—Graphs of Current and Impressed and Counter e.m.fs. in an Alternating-Current Circuit Containing Inductance Only. (Actually there cannot be a circuit which does not have some resistance.)

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tion. Just how this may be done and a verification of the fact that Ohm's law holds for alternating-current circuits, are shown in the illustrative example which follows. In the circuit of this example there are only resistance and inductance.

EXAMPLE.—In a certain coil in a 60-cycle alternating-current circuit (Fig. 1), the current is 11 amp. with an impressed e.m.f. of 110 volts. The resistance of the coil is 5 ohms, and its inductance is 0.023 henry. Analyze this situation and show that *the current —11 amp.—in the coil is equal to the available or energy e.m.f. across*

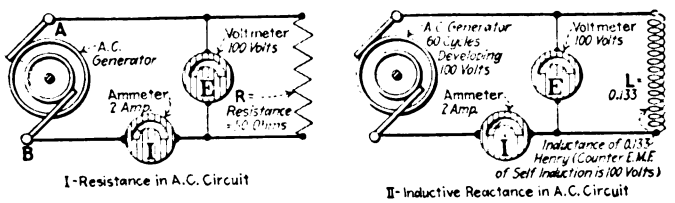

Fig. 5—Examples of Resistance and Inductive Reactance in Alternating-Current Circuits

the coil divided by its resistance—5 ohms.; also show that the available or energy e.m.f. is equal to the impressed e.m.f. minus the counter e.m.f. of self-induction developed in the coil. SOLUTION.—Now the resistance of the coil AB (Fig. 1) is 5 ohms. Hence, by Ohm's law, the available, or energy e.m.f., which actually impels the 11-amp. current in it must be:—$Ee = R \times I = 5 \times 11 = 55$ *volts.*

The impressed e.m.f., Ei, is 110 volts. Since the coil has an inductance of 0.023 henry and the current in it is 11 amp., the counter e.m.f. of self-induction developed in the coil must be:—$Ec = 6.28 \times f \times L \times I = 6.28 \times 60 \times 0.023 \times 11 = 95.3$ *volts.*

Now proceed with the solution of the problem to show that the energy e.m.f.—55 volts—is equal to the impressed e.m.f.—110 volts—minus the counter e.m.f. of self-induction developed in the coil—95.3 volts. That is, show that 55 volts is the difference between an impressed e.m.f. of 110 volts and a counter e.m.f. of self-induction of 95.3 volts.

First draw reference lines at right angles to one another as shown at I in Fig. 2. Now plot a vector, OEe, as shown in II, to represent in length to scale, the energy e.m.f. of 55 volts. This vector is plotted horizontally because the e.m.f. it represents is in phase with the current and it is usually most convenient to plot horizontally, vectors representing values which are in phase with the current.

Now plot the vector representing the counter e.m.f. of self-induction of 95.3 volts. Since the counter e.m.f. of self-induction

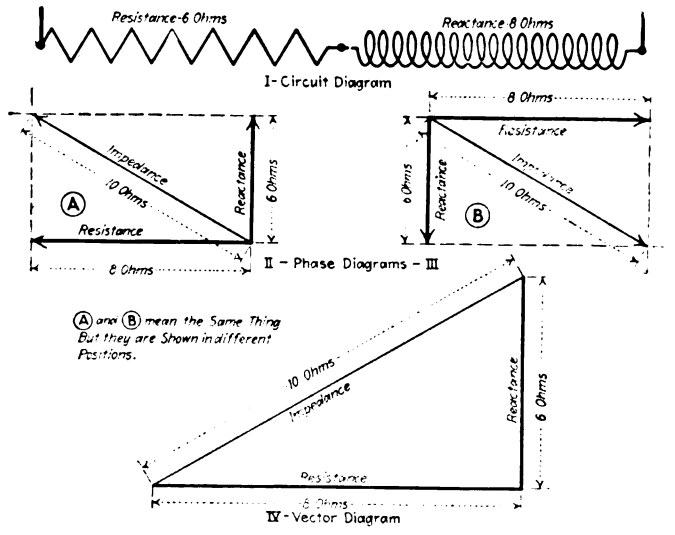

Fig. 6—Impedance Diagrams

always lags 90 deg. behind the current, and consequently 90 deg. behind the energy e.m.f., this vector plotted to scale 95.3 volts long will fall in the position OEc, as shown at III.

There have now been plotted, in III, two vectors OEe and OEc, representing, in length and phase relation, the energy e.m.f. of 55 volts and the counter e.m.f. of self-induction of 95.3 volts. It now remains to plot another vector, which will be called OEi, which will represent in length and phase relation the impressed e.m.f. of 110 volts. If the vector OEe (in III) represents the difference between two e.m.fs. and OEc represents one of the two, it follows that OEi (in IV) must represent the other e.m.f. of the two. The vector OEi is plotted thus:—Draw the construction line Ec and Ee, then draw OX through O parallel to Ec and Ee. Now draw construction line EeY parallel to OEc. Then, the point, Ei, of intersection of the OX and EeY will determine the length of the vector OEi which is plotted along OX.

Now by scaling it will be found that the length of OEe equals 110 volts, which as stated in the specifications of the above

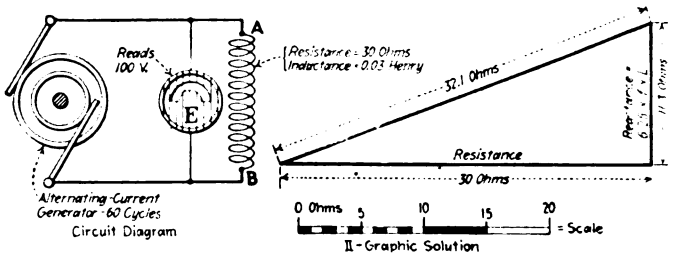

Fig. 7—Example in Computing Impedance

example, is the value of the impressed e.m.f. Thus it has been shown that the available or energy e.m.f. of 55 volts which impels the 11-amp. current in the coil of Fig. 1 is equal to the difference between the impressed e.m.f. of 110 volts and the counter e.m.f. of self-induction of 95.3 volts.

By scaling with a protractor it is found that the angle ϕ, in Fig. 2—IV, is 60 deg. Hence, it follows that, in this particular circuit, the current—and the energy e.m.f.—lag 60 deg. behind the applied e.m.f.

The portion or component of impressed e.m.f. which is necessary to neutralize the counter e.m.f. of self-induction must be just equal in intensity and opposite in phase to the counter e.m.f. of self-induction. That this is true is evident almost without explanation. Any impressed e.m.f. in a circuit containing resistance and inductance may be considered as comprising two components, parts or portions:—an energy e.m.f. and an induction

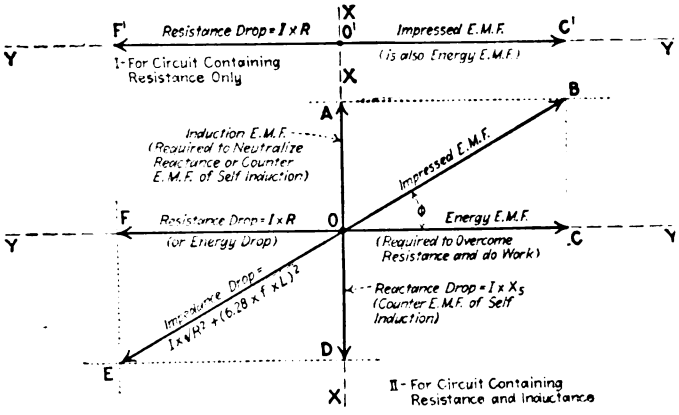
Resistance Drop = I x R
Impressed E.M.F.
(Is also Energy E.M.F.)
I-For Circuit Containing Resistance Only
Induction E.M.F. (Required to Neutralize Reactance or Counter E.M.F. of Self Induction)
Impressed E.M.F.
Energy E.M.F.
(Required to Overcome Resistance and do Work)
Resistance Drop = I x R (or Energy Drop)
Reactance Drop = I x Xs (Counter E.M.F. of Self Induction)
II-For Circuit Containing Resistance and Inductance

Fig. 8—Graphic Statement of e.m.f. Relations in Alternating-Current Circuits

e.m.f. Thus, consider Fig. 3 which has been plotted to the values of the example just above recited. The vector OEi (Fig. 3) represents the impressed e.m.f. It may be considered as comprising two components OEn and OEe differing in phase by 90 deg. The component OEe represents the energy part of the impressed e.m.f. which is available for actually circulating the current in the circuit. The component OEn represents the "induction" component or part of the impressed e.m.f. which is "used up" in neutralizing the counter e.m.f. of self-induction.

If the induction component of the impressed e.m.f. is to neutralize the counter e.m.f. of self-induction, the induction e.m.f. must be a maximum in the negative direction (Z, Fig. 4) at the instant (Y) the counter e.m.f. of self-induction is a maximum in the positive direction. That is, these two e.m.fs. always differ in phase by 180 deg. as shown in the phase diagram of Fig. 3 and by the graphs of Fig. 4.

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EXAMPLE.—If a current of 2 amp. is forced through the inductance of 0.133 henry (no resistance or permittance in this imaginary circuit) of Fig. 5—*II*, the generator must impress across the inductance a pressure just equal to the counter e.m.f. induced by the 2-amp. current. As can be shown by applying the formula for computing the counter e.m.f. of self-induction in a coil, the counter e.m.f. developed by the 2-amp. current through an induction of 0.133 henry is 100 volts. It follows therefore, that the

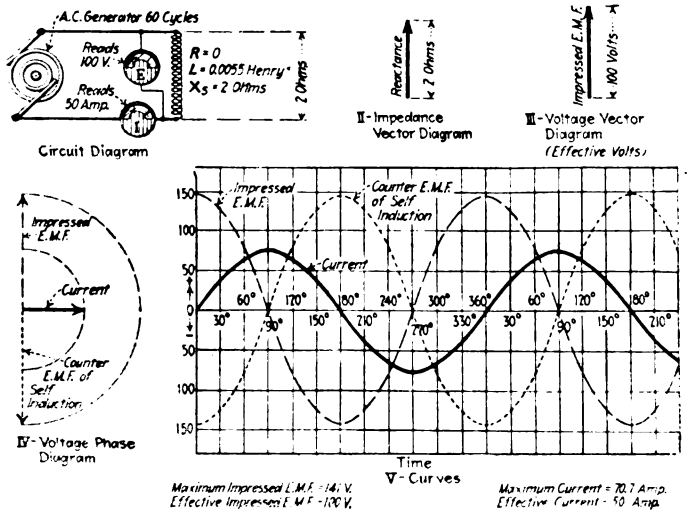

Fig. 9—Relations in an Alternating-Current Circuit of 2 Ohms Reactance —No Resistance

impressed e.m.f. necessary to impel this 2-amp. current must also be just 100 volts—since it is assumed that in this imaginary circuit there is no resistance. Furthermore, since it is assumed that there is no resistance in the circuit, there is no energy e.m.f. The current which circulates in this resistanceless circuit does no work and represents no energy. The counter e.m.f. and the impressed e.m.f. in this imaginary circuit must differ in phase (see Fig. 4) by 180 deg.

It is not usual in solving problems in alternating-currents to first determine the energy e.m.f. and then compute the current by dividing this energy or available e.m.f. value by the resistance, as was done in the solution of the problem relating to Fig. 1. It is, as will be shown, possible to treat the counter e.m.f. effects of inductance as if these effects were a kind of resistance—which is called reactance. They—reactance effects—can be combined with the actual "omic" resistance of the circuit to determine the total opposition, impedance, offered to flow of current in the

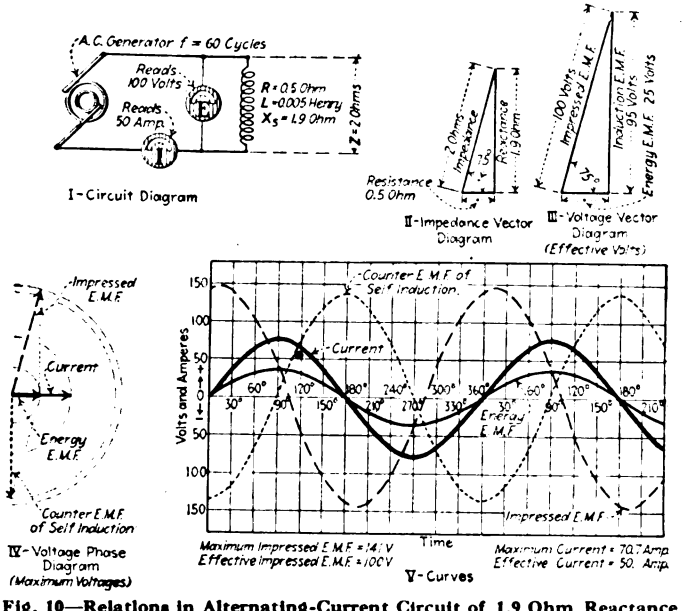

Fig. 10—Relations in Alternating-Current Circuit of 1.9 Ohm Reactance and 0.5 Ohm Resistance

circuit. Then, if the impressed-voltage value be divided by this composite quantity called "impedance" (which is expressed in ohms) which represents the combined opposition due to actual resistance and inductance (and permittance if there is appreciable permittance in the circuit) the value of current, in amperes, in the circuit will result. The situation is discussed and illustrative examples are given in following paragraphs.

Inductive reactance is the name which has been given to the opposition offered to the flow of alternating currents due to the counter e.m.f. of self-induction. It is numerically equal but opposite to the counter e.m.f. of self-induction in an alternating-current circuit. Reactance is expressed in ohms just as is resistance. Just as an e.m.f. is necessary to impel current through resistance, an e.m.f. is also necessary to "overcome" or neutralize the counter e.m.f. induced in an alternating-current circuit which contains inductance—that is, inductive reactance. The formula

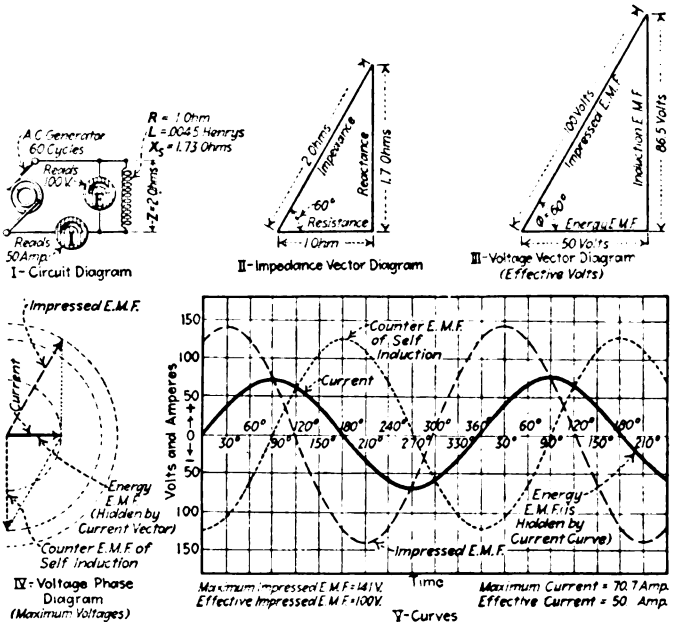

Fig. 11—Relations in an Alternating-Current Circuit of 1.7 Ohm Reactance and 1 Ohm Resistance

whereby the inductive reactance in any alternating-current circuit may be computed is:—

$$(1) \qquad Xs = 6.28 \times f \times L \qquad \text{(ohms)}$$

$$(2) \qquad = \frac{Xs}{6.28 \times L} \qquad \text{(cycles per sec.)}$$

$$(3) \qquad L = \frac{Xs}{6.28 \times f}$$

Wherein.—Xs = inductive reactance of the circuit in ohms. f = frequency of e.m.f. impressed on circuit in cycles per second. L = inductance in the circuit in henrys.

Note that the counter e.m.f. of self-induction, $Ec = 6.28 \times f \times L \times I$ and that the portion "$6.28 \times f \times L$" of this quantity is called inductive reactance. When the reactance (Xs, in ohms) is multiplied by the current (I, in amp.) the portion or component of the impressed e.m.f. in volts which is necessary to neutralize the counter e.m.f. of self-induction (so that there may be available an energy e.m.f. to force a current, I, to flow) is the result. The similarity between resistance and reactance is shown by the following examples:—

EXAMPLE.—In the circuit of Fig. 5—*I*, which contains only resistance, the e.m.f. necessary to produce a current of 2 amp. is, substituting in the Ohm's law formula:— $E = R \times I = 50 \times 2 = 100$ *volts*. With 0.133 henry in circuit, as in Fig. 5—*II*, the 60-cycle, alternating e.m.f. necessary to force a current of 2 amp.

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through the reactance having an inductance of 0.133 henry is similarly obtained. Thus:—

$$E = Xs \times I$$
$$E = (6.28 \times f \times L) \times I$$
$$E = (6.28 \times 60 \times 0.133) \times 2 = 50 \times 2$$
$$E = 100 \text{ volts.}$$

The inductive reactance in this example is, therefore, 50 ohms.

For direct-current circuits:—

(4) $$\text{Current} = \frac{\text{e.m.f.}}{\text{resistance}} \text{ or } I = \frac{E}{R}$$

(5) $$\text{Current} = \frac{\text{e.m.f.}}{\text{reactance}} \text{ or } I = \frac{E}{Xs}$$

(6) and $$E = I \times Xs$$

(7) or $$Xs = E \div I$$

Wherein.—E = the e.m.f., in volts (effective e.m.f. in an a.c. circuit) impressed on the circuit. I = current in amp., in the circuit. Xs = reactance, in ohms, of the circuit.

NOTE.—Reactance cannot be added directly to resistance although their effects are similar in that they both tend to limit the current intensity in a circuit. How resistance and reactance

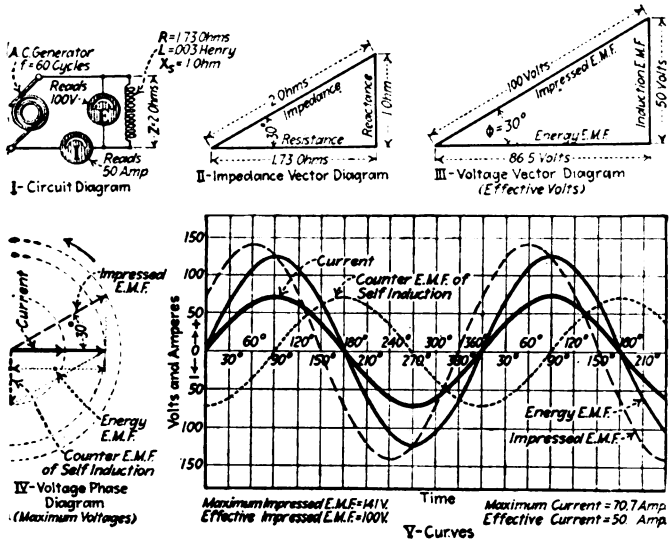

Fig. 12—Relations in Alternating-Current Circuit of 1.7 Ohm Resistance and 1 Ohm Reactance

can be added will be shown later. Reactance may also be defined as that quantity which, when multiplied by the current, gives that *component* or portion of the impressed e.m.f. which is at right angles to the current.

Impedance is the name given to that quantity which represents the combined resisting effects of:—(1) actual (Ohmic) resistance and (2) the apparent resistance (*reactance*) or the opposition due to counter e.m.fs. of self-induction. Impedance is expressed in ohms. If the *impedance* (ohms) of a circuit be multiplied by the current (amperes) in the circuit the resulting value will be the alternating e.m.f. in volts impressed on the circuit. It follows then that, for alternating-current circuits:—

(8) $$I = \frac{E}{Z} \quad (\text{amperes})$$

(9) hence, $$Z = \frac{E}{I} \quad (\text{ohms})$$

(10) and $$E = I \times Z \quad (\text{volts})$$

Wherein.—I = current (effective) in the circuit, in amp. E = the e.m.f., effective, in volts, impressed on the circuit. Z = the impedance of the circuit in ohms.

To obtain the value of impedance, resistance must be combined with, that is, added to, reactance. However, since the effects of resistance and reactance differ in phase by 90 deg. they cannot be added arithmetically. It can be shown that the counter or opposing effect of inductive reactance leads the opposing effect of resistance by 90 deg. They are at right angles to each other and can be represented by phase or vector diagrams as in Fig. 6.

EXAMPLE.—Fig. 6—*I* shows a circuit having a reactance of 8 ohms. The impedance (the sum of the resistance and reactance) was obtained by drawing diagonals in the parallelograms of the phase diagrams and by drawing a hypotenuse in the vector diagram. The resulting value is the same in each case.

In a right-angled triangle:—

(11) $$\text{Hypotenuse} = \sqrt{(\text{one side})^2 + (\text{other side})^2}$$

It follows that:—

(12) $$\text{Impedance} = \sqrt{(\text{resistance})^2 + (\text{reactance})^2}$$

Now, it can be shown that inductive reactance $= 6.28 \times f \times L$. Therefore (for a circuit which contains only inductance and resistance—no permittance):—

(13) $$Z = \sqrt{R^2 + (6.28 \times f \times L)^2} \quad (\text{ohms})$$

Wherein.—Z = impedance in ohms. R = resistance in ohms.

EXAMPLE.—What is the impedance of the coil of Fig. 7—*I*? It has an inductance of 0.03 henry and a resistance of 30 ohms. The frequency is 60 cycles. What will be the current with an impressed e.m.f. of 100 volts? SOLUTION.—Substituting in the impedance formula:—

$$Z = \sqrt{R^2 + (6.28 \times f \times L)} = \sqrt{(30 \times 30) + (6.28 \times 60 \times 0.03)}$$
$$(6.28 \times 60 \times 0.03) = \sqrt{(30 \times 30) + (11.3 \times 11.3)} = \sqrt{900 \times 127.7} = \sqrt{1027.7} = 32.1 \text{ ohms.}$$

The problem could be solved graphically as suggested at *II*, by laying out the sides of a right-angled triangle to scale to represent the resistance and reactance and then scaling the hypotenuse to obtain the impedance. The current that would flow through the coil AB with a 60-cycle e.m.f. of 100 volts impressed across it would be:—(formula 13)

$$I = \frac{E}{Z} = \frac{100}{32.1} = 31.2 \text{ amp.}$$

The relations of the different e.m.fs. and the components thereof in alternating-current circuits containing resistance only and containing resistance and inductance are shown, respectively, in Fig. 8 at *I* and *II*. In a circuit containing resistance only, the e.m.f. O^1C^1 (as shown at *I*) impressed by the generator or other source of alternating e.m.f., is spent wholly in "overcoming" or neutralizing the resistance drop O^1F^1. The current (*I*) in the circuit (for which no vector is shown) is in phase with the impressed e.m.f. O^1C^1. In a circuit (*II*) containing resistance and inductance, there are two counter forces which the impressed e.m.f. must overcome:—(1) *the resistance drop OF*, (2) *the reactance drop OD*—which is the counter e.m.f. of self-induction. The resultant or vector sum of OF and OD is the impedance drop OE. The e.m.f. OB impressed on the circuit under consideration must be equal and opposite to the impedance drop OE. This impressed e.m.f. OB may, as before outlined, be considered as being composed of two components:—(1) *an induction component*, OA, which neutralizes the counter e.m.f. of self-induction and which represents no real energy. (2) *An energy component*, OC, which actually impels the current which does work through the resistance and which represents real energy. Component OA is equal and opposite to OD The current will always be in phase with OC and will lag behind the impressed e.m.f. OB by the angle ϕ. The cosine of the angle ϕ is the power factor of the circuit.

Examples of voltage and current relations in circuits having different proportions of resistance and inductance are shown in Figs. 9, 10, 11 and 12. In all cases the current will be in phase with the energy or available e.m.f. but will, since there is inductance in these circuits, lag behind the impressed e.m.f. The greater the relative amount of inductance the greater will be this lag. In each example the reactance was first computed and then the impedance and voltage triangles were drawn in accordance with the preceding suggestions. The angle, ϕ, between the hypotenuse and the base of each of the triangles is the angle by which the current lags behind the impressed e.m.f. Note that the lag angles in the triangles are the same as in the corresponding phase diagrams and graphs. If a circuit having no resistance but some reactance could exist, its voltage and current relations would be as shown in Fig. 9 and the current would lag exactly 90 deg. behind the impressed e.m.f. The condition shown in Fig. 9 can never be realized in practice because all conductors have some resistance—however, the condition suggested may be approximated.

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JOVIANS!

Can You Use Any of These Jobs?

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, are seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau. A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of any of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

35. **Store Manager.** Indiana house wants experienced young man to take charge of retail and wholesale departments; salary, $100 per month.

36. **Foreman.** Ohio motor manufacturing concern wants practical man to take care of assembling department.

40. **Electrical Engineer.** Manufacturing plant near Pittsburg is in the market for university graduate familiar with A. C. and D. C. switchboards; salary, $125 per month.

42. **Illuminating Engineer.** Attractive opening with firm of consulting engineers.

43. **Fuel Engineers.** Men wanted, must be familiar with economical central station operation.

44. **Electricians.** Oklahoma telephone system is in need of practical men.

45. **Electrical Engineers.** Opening with telephone concern; switchboard and power plant departments.

46. **Meter Testers.** Men wanted in Oklahoma for inspection and testing of phone installations.

47. **Telephone Engineers.** Switchboard engineering department of a southwestern telephone system can use two or three technical graduates.

48. **Testing Engineers.** Attractive opening, with Oklahoma telephone system, for several young men.

49. **Construction Engineer.** Idaho reclamation project needs young man familiar with construction, operation and cost-keeping; must have tact and initiative. $125 per month to right man.

50. **Cost Clerk.** Good salary to man familiar with electrical jobbing business, cost and pricing; New Jersey house.

52. **New Business Agent.** Texas public service corporation will pay $100 per month for competent and active man.

54. **Electrical Supply Salesman.** Western Missouri house needs man to travel Kansas City territory.

55. **Steam Plant Superintendent.** Opportunity for man thoroughly informed about combustion, and acquainted with boiler room and steam turbine operation; $3,500 per year.

56. **Electrical Supply Salesman.** An opening for New Jersey territory.

57. **Electrical Supply Salesman.** Thoroughly experienced man wanted to travel for Minneapolis house.

58. **Armature Winder.** Opening in New York City.

59. **Telephone Engineer.** Chicago manufacturing concern can use one or two competent men.

60. **Telephone Engineer.** An opening for technical, graduate engineer, in Buffalo.

61. **Sales Engineer.** Single man wanted, familiar with small motor construction and appliance; Pittsburgh territory.

62. **Draftsman.** Cleveland concern needs man with technical education for machine design; good salary.

63. **Salesmen for Side Line.** Opportunity for gas appliance or electric specialties salesmen in western territory to take on a line of electric fixtures on commission. Same opening for Western Canada.

64. **Fixture Salesman.** Kansas City house wants man not over 35 years of age, familiar with better class fixtures; reasonable pay, with chance for advancement.

65. **Salesman.** Eastern electrical supplies house has opening for man over draft age, familiar with North and South Carolina territory.

66. **Department Manager.** Opportunity for capable man as head of electrical department in a West Virginia hardware house; must be familiar with buying and source of supplies.

67. **Store Salesmen.** Illinois house will pay salary and commission to right man.

68. **Retail Salesman.** San Francisco house invites correspondence with man desiring to locate there; expense of trip taken into consideration.

69. **Electricians.** Eastern contracting concern wants five men who can take charge of construction gang, putting up switchboards and wiring as laid out on blue prints; 50 cents per hour for 56 hour week, with overtime at time and one-half.

70. **Electrical Tool Designer.** Man with practical experience wanted by Cincinnati house.

71. **Small Property Man.** Combination wireman, meterman and troubleman needed by a small-town Missouri public utility.

72. **Lineman.** Opportunity in small Missouri town.

73. **Salesman.** Man wanted to sell vacuum cleaners and appliances on commission.

74. **Bookkeeper.** Chicago house wants young man.

75. **Salesman.** Man who can sell the goods needed by New York electrical supply house.

76. **Clerk.** Young man familiar with purchases and invoices, required by New York electrical distributing house.

77. **Cost Clerk.** Man familiar with electrical supply jobbing business wanted in Toledo.

78. **Salesman.** Man wanted to handle inquiries and make quotations over the telephone; New York house.

80. **Supply Salesman.** Opportunity for young man with practical experience to work into position of responsibility with growing firm; reasonable salary to start.

81. **Salesmen.** Philadelphia house wants sales and electrical engineers to handle a line of machinery and supplies.

82. **Salesmen.** Specialty commission men wanted by Chicago distributors of standard specialties.

83. **Purchasing Agent.** Buyer wanted by large electrical supply house.

84. **Estimators.** Men capable of handling the wiring of office buildings, wanted in Cleveland.

85. **Motor Salesman.** Chicago and Kansas City territory open for men with experience selling a. c. and d. c. apparatus.

86. **Electrical-Mechanical Engineer.** Middle West opening for man familiar with a. c. and d. c. design, to work under chief engineer and direct work in drafting room.

87. **Sales Positions.** Eastern manufacturer willing to train and pay good salary to promising beginners (under draft age), with opportunities for rapid advancement; knowledge of foreign languages an asset.

88. **Lineman.** Tennessee public utility wants competent man; $2.75 per day.

89. **Bookkeeper.** One who can also act as chief clerk, by middle-west publicity utility company; $100 per month.

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Coming Conventions

Association of Iron and Electrical Engineers.

Eleventh annual convention, Philadelphia, Pa., Bellevue-Stratford Hotel, September 10 to 14. Secretary J. F. Kelly, National Tube Company, McKeesport, Pa.

Association of Railway Telegraph Superintendents.

Annual convention, Hotel Raleigh, Washington, D. C., September 10 to 13. Secretary, W. L. Connelly, Gibson, Ind.

International Association of Municipal Electricians.

Annual convention, Niagara Falls, N. Y., September 11 to 14. Secretary, Clarence R. George, Houston, Texas.

Northwest Section, National Electric Light Association.

Annual convention, Spokane, Wash., September 12 to 15. Secretary, J. F. Farquhar, Washington Water Power Company, Spokane, Wash.

American Electrochemical Society.

Annual convention, Pittsburgh, Pa., October 3 to 6. Secretary, Prof. J. W. Richards, Lehigh University, South Bethlehem, Pa.

National Electrical Contractors' Association of the United States

Annual convention, New Orleans, La., October 10 to 13. Secretary, H. C. Brown, Utica, N. Y.

CHARTERED JOVIAN LEAGUES

Cincinnati	Charter No.	1
Kansas City, Mo.	" No.	2
Pittsburgh	" No.	3
Minneapolis	" No.	4
St. Joseph, Mo.	" No.	5
Louisville, Ky.	" No.	6
Stark County Jovian League (Comprising the towns of Massillon, Canton and Alliance, Ohio.)	" No.	7
Tulsa, Okla.	" No.	8
Eau Claire, Wis.	" No.	9
Harrisburg, Pa.	" No.	10
Wichita, Kan.	" No.	11
Winnipeg, Man.	" No.	12
Bay City, Mich.	" No.	13
Milwaukee, Wis.	" No.	14
Port Arthur, and Fort William, Ont.	" No.	15
Oklahoma City	" No.	16
Galveston, Texas	" No.	17
Muskogee, Okla.	" No.	18
Mansfield, Ohio (Comprising Richland and Ashland Counties)	" No.	19
St. Louis	" No.	20
Southwestern Michigan Jovian League (Benton Harbor, Michigan)	" No.	21

If You Are a Jovian in good standing, you are entitled to the Insurance Benefit the Order has provided for members. It means dollars to you. Read pages 18-19.

JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, W N. Lockhert, Po. 14383, care N. O. T. & L. Co.

BENTON HARBOR—Second Tuesday of each month, at place determined b members. Secretary, C. O. Nichols, Po. 15537, care Benton Harbor & St. Joseph Railway & Light Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, Edmond D McCarthy, Po. 589-10, 41 East Eagle Street.

CHATTANOOGA—Wednesday, 12 m., Read House. Chairman, Howell Graham Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge 1900 Continental & Commercial Bank Building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, O. B Marsh, Po. 17718, care Federal Sign System (Electric), 37 East Third street.

CLEVELAND—Regular meeting, Thursday, 12 m., Hotel Statler. Club room open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hote Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Ry. Power & Light Co

DALLAS—First and third Mondays, Hotel Adolphus, 12:15 p. m. Secretary, E E. Roessler, Po. 12128, P. O. Box 1506.

DAYTON—First and third Mondays of each month, 12 m., Miami Hotel. Sec retary, O. E. Howland, Po. 17127, care Dayton Power & Light Co.

DENVER—Wednesday, 12:15 p. m., Kaiserdorf Hotel. Secretary, R. Arnold Lewis, Po. 11514, care Edins Lamp Works.

EAU CLAIRE.—First Monday each month. Secretary, Gurth Williams, Po 18268.

FORT WAYNE—Fifteenth day of each month (hour selected by president) Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Co.

GALVESTON—Meet on call. Secretary, Howard Jolly, Po. 16826, care Posta Tel. Co.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association o Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Co.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Co.

HUNTINGTON—Last Friday each month, Huntington Hotel. Secretary, H. A Haddox, Po. 9164, 1116 Fourth avenue.

INDIANAPOLIS—Monday, 12:15 p. m. Secretary, A. H. Smith, Po. 13580, care Ford Motor Car Co., 1315 East Washington Street.

KANSAS CITY—Every other Friday, 12:15 p. m., Sexton Hotel, Secretary, T. R Harber, Po. 18908, 1500 Grand Avenue.

LA CROSSE—First Thursday each month, Elks Club, 6 p. m. Secretary Dan. J. Whalen, Po. 16022, care Thill-Manning-Whalen Co.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Co.

LOS ANGELES—Wednesday, 12 m., Jahnke's Tavern, 534 S. Spring St. Secretary, Clifton Peters, Po. 12734, 108 Edison building.

LOUISVILLE—Tuesday, 12:15 p. m., Hotel Henry Watterson. Secretary, C. C Dicken, Po. 16660, care Louisville Gas & Electric Company.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel.

MILWAUKEE—Tuesday, 12 m., Maryland hotel.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

MUSKOGEE—Secretary, J. H. Schmidt, care Muskogee Gas & Electric Co.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C Heidrick, Po. 14439, care Electric Repair & Motor Co.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne St., New Orleans, La.

NEW YORK—First Wednesday each month, 12:15 p. m., Browne's Chop House 1424 Broadway. Secretary, H. E. Cleland, Po. 18656, care Electrical World, 23 West Thirty-Ninth Street.

OKLAHOMA CITY—Monday, 12:15 p. m., Lee Huckins Hotel. Secretary, O. T Jenkins, Po. 14273, care Nunn Electric Co.

PEORIA—First and third Saturdays of each month, 1 p. m., Jefferson Hotel Secretary, F. S. Simms, Po. 13385, care Avery & Co.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R Browne, Po. 14654, 131 Nippon St.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, J. H. Van Aernam, Po. 14051, care General Electric Co.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company restaurant, Kellog street. Secretary, J. O. Roser, Po. 10412, care General Electric Co

RICHMOND—Third Wednesday of each month, Business Men's Club Secretary, L. E. Walker, Po. 6610, care Western Electric Co.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R Bellis, Po. 16129, care Rochester Railway & Light Co.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G Wharton, Po 6653, care H. G. Schuwirth Co.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary J. W. Ridpath, Po. 7739, 505 Rialto building.

SPOKANE—First and third Wednesdays of each month, 12 m., Davenport hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Co.

STARK COUNTY—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

ST. LOUIS—Tuesday, 12:15 p. m., Mercantile Club. Secretary, Geo. McD Johns, Po. 9052, Room 401, City Hall.

ST. JOSEPH, MO.—Secretary, W. R. Thomas, Po. 1489, care American Elect. Co

ST. PAUL—First and third Thursdays of each month, 12:10 p. m., Emporium Tea Rooms. Secretary, A. L. Frankenburger, Po. 5289, care Western Electric Co. 235 East Sixth street.

TULSA, OKLA.—Monday, 12 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G Walker, Po. 6871, 18 West Third Street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B Mirick, Po. 1722, care National Electric Supply Co.

WICHITA—First and third Mondays of each month, 12 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Co.

WINNIPEG—Every other Wednesday, 12:15 p. m., Hotel St. Charles. Secretary C. T. Kummen, Po. 15957, 386 Donald Street.

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JOVIAN HOTELS

HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their current membership cards at the time of settlement. Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage. Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

	Minimum Without Bath	Minimum With Bath
Asheville N. C.—Langren	.....	.....
Atlantic City, N. J.—Isleworth	$1.50	$2.00
Baltimore, Md.—Emerson	$2.00	$2.50
Boise, Ida.—Idanha	$1.00	$1.50
Boston, Mass.—Brunswick	.....	.....
Charlotte, N. C.—Buford	$1.00	$1.50
Chattanooga, Tenn.—Theresa	.....	.....
Colorado Springs, Colo.—Acacia	.....	.....
Columbia, S. C.—Colonial	.....	.....
Dallas, Tex.—Oriental	$1.50	.....
Des Moines, Ia.—Kirkwood	.....	.....
Denver, Colo.—Albany	$1.00	$1.50
Detroit, Mich.—Hotel Tuller	.....	.....
Dixon, Ill.—Dixon Inn	$1.00	.....
Edmonton, Alta.—Alberta	.....	.....
Eau Claire, Wis.—Eau Claire	.....	.....
Ft. Wayne, Ind.—Wayne	$1.00	.....
Ft. Worth, Tex.—Metropolitan	.....	.....
Gary, Ind.—Gary	$1.00	$1.50
Grand Rapids, Mich.—Livingston	$1.00	.....
Harrisburg, Pa.—Columbus	.....	.....
Houston, Tex.—Bender	$1.50	$2.00
Hutchinson, Kan.—Chalmers	.....	.....
Idaho Falls, Ida.—Eleanore	$1.00	$2.00
Jackson, Miss.—Royal	.....	.....
Jacksonville, Fla.—Mason	.....	.....
Jacksonville, Ill.—Pacific	.....	.....
Kalispell, Mont.—Kalispell	$1.00	.....
Kansas City, Mo.—Coates	$1.00	$1.50
Lethbridge, Alta.—Alexandria	$1.00	.....
Los Angeles, Cal.—Clark / New Rosylyn	..... / $1.00	..... / $1.50
Louisville, Ky.—Galt	.....	.....
Madison, Wis.—Capital	$1.00	.....
Milwaukee, Wis.—Charlotte	$1.00	.....
Mitchell, S. D.—New Navin	.....	.....
Montgomery, Ala.—Exchange	.....	.....
Montreal, P. Q.—St. Lawrence Hall / Windsor	..... /	..... / .....
Muskegon, Mich.—Muskegon	$1.00	$1.50
New Orleans, La.—De Soto	$1.00	.....
New York, N. Y.—Breslin	.....	.....
Niagara Falls, N. Y.—Prospect	.....	.....
Norfolk, Va.—Southland	$1.00	$1.50
Oshkosh, Wis.—Tremont	.....	.....
Peoria, Ill.—Mecca	$1.00	.....
Philadelphia, Pa.—New Bingham	$1.50	$2.50
Pittsfield, Mass.—Wendell	$1.50	.....
Portland, Ore.—Multnomah / Oregon	$1.50 / $1.00	..... / $2.00
Richmond, Va.—Jefferson / Richmond	$1.50 / $1.50	$2.50 / $2.50
Roanoke, Va.—Rockledge	$1.00	.....
Rochester, N. Y.—Powers	.....	$2.00
Rutland, Vt.—Berwick	.....	.....
St. Joseph, Mo.—St. Francis	.....	.....
St. Louis, Mo.—American	$1.50	.....
Salt Lake City, Utah—Newhouse	.....	.....
San Angelo, Tex.—Landon	.....	.....
San Diego, Cal.—San Diego	$1.00	.....
San Francisco, Cal.—Argonaut / Sutter	$1.00 / $1.50	$2.00 / .....
Santa Barbara, Cal.—Potter	.....	.....
Schenectady, N. Y.—Mohawk	$1.00	$2.00
Seattle, Wash.—Seattle	$1.00	$2.00
Sheridan, Wyo.—Sheridan	.....	.....
Shreveport, La.—Youree	.....	.....
Sioux City, Ia.—Martin	$1.00	$2.00
Spokane, Wash.—Spokane	.....	.....
Springfield, Mo.—Colonial	.....	.....
Tacoma, Wash.—Olympus	.....	.....
Three Rivers, Mich.—Three Rivers	$2.00	.....
Tucson, Ariz.—Heidel	.....	.....
Vicksburg, Miss.—Carroll	$1.00	.....
Waco, Tex.—New State	$1.00	$2.00
Watertown, S. D.—Kampeska	$1.00	.....
Winnipeg, Man.—St. Regis / Wellington	$1.50 / $1.00	..... / $1.50
Winona, Minn.—Winona	.....	.....

SALESMAN WANTED

Electrical supply house of New York City requires the services of a thoroughly experienced salesman. State fully experience, age, salary and references, addressing "M," THE JOVIAN ORDER, Syndicate Trust Building, St. Louis, Mo.

PURCHASE-INVOICE CLERK WANTED

Electrical supply house of New York City requires the services of a thoroughly experienced purchase-invoice clerk. State fully experience, age, salary and references, addressing "M," THE JOVIAN ORDER, Syndicate Trust Building, St. Louis, Mo.

A LITTLE PHILOSPHY

Man needs but little here below,
As he goes ambling to and fro;
But what he needs, it is his fad
To always need it mighty bad.
Man wants a lot he does not need
His wants reveal a sign of greed,
But it is almost safe to bet
All of his wants he does not get.
But whether need or want, he knows
That he must seek it where it grows.
He knows he has to do his bit
If he expects to harvest it.
Another thing he comprehends,
That on his judgment much depends.
For instance if he wants to sell,
He finds out where the buyers dwell;
And then if he is very wise
He starts right in to advertise.
Now if his firm was selling lace
He wouldn't buy this kind of space.
If in electric goods they deal,
Here IS THE PLACE he'd make his spiel.

* * * *

A TASK

To be honest, to be kind, to earn a little, and to spend a little less, to make upon the whole a family happier for his presence, to renounce when that shall be necessary and not be embittered, to keep a few friends, but these without capitulations; above all on the same grim condition, to keep friends with himself. Here is a task for all that a man has of fortitude and delicacy.—Robert Louis Stevenson.

MANUFACTURER'S AGENT with facilities for marketing electrical lines in the east desires permanent connection on commission or straight purchase basis with factories on exclusive territorial rights. Address "M. A." care of The Jovian, Syndicate Trust Building, Saint Louis, Missouri.

ELECTRICIAN AND DESIGNER WANTED

One familiar with the line of portable electric tools, such as drills, grinders and other small kindred portable electric tools. To be fully conversant with application of universal current as well as alternating and direct. Having necessary experience and machine shop practice to improve present tools and design such additional tools as may be desired. Applications treated confidentially, and should give full information with salary expected. Address "Electrician and Designer," care of THE JOVIAN, Syndicate Trust Building, St. Louis, Mo.

"IN ITS INFANCY"

A BRIEF HISTORY OF THE PIONEER DAYS OF THE ELECTRIC LIGHTING INDUSTRY

By WM. M. PORTER

PRICE, TWENTY-FIVE CENTS

Note—Mr. Porter writes, with first-hand knowledge, having been intimately connected with the efforts of Mr. Charles F. Brush in the early days of the industry.

Address, WM. M. PORTER

18 East Grand Avenue : : : : CHICAGO, ILL.

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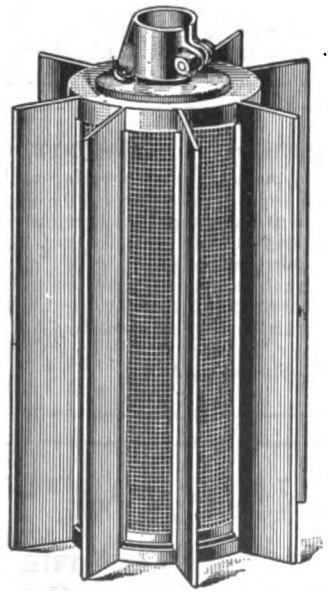
NATIONAL MAZDA

THE WAY TO BETTER LIGHT

Every National MAZDA Lamp Bears Some One of These Labels

NATIONAL LAMP WORKS
OF GENERAL ELECTRIC CO.
NELA PARK CLEVELAND



"Maxum" Grounding Box

An absolutely perfect ground for Electric Light, Power, Telephone, Telegraph, Trolley and Railway Signal Installations. Wherever the "Maxum" Grounding Box is used it assures protection to equipment and guarantees uninterrupted service.

The "Maxum" Grounding Box is made of cast iron, heavily galvanized, containing a special hygroscopic compound which keeps the earth always moist and in which are included chemicals that supply to the strata of earth surrounding the box the elements that support electrolytic conduction.

It is easily installed. "Just bore a hole and drop it in." Will last indefinitely. No further grounding trouble. No upkeep or maintenance cost.

Complete information on request.

THE FAIRMOUNT ELECTRIC & MFG. CO., Philadelphia

Representatives

I. A. BENNETT CO., Chicago
AYLSWORTH AGENCIES CO., San Francisco Los Angeles
W. W. GEISSE, Minneapolis
WM. S. BROWN ELECTRIC CO., New York
G. V. CARPENTER, Buffalo
WETMORE-SAVAGE CO., Boston

DALE B. SCARBOROUGH, Special Representative

FAIRMOUNT ELECTRICAL SPECIALTIES

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THE JOVIAN

Volume Eleven SEPTEMBER, 1917 Number Ten

A LETTER FROM THE CANDIDATE FOR THE OFFICE OF SIXTEENTH JUPITER

"THE FORWARD-THINKING JOVIAN LIVES FOR THE MORROW BY WHOLESOMELY LIVING FOR THE DAY"

TEXAS POWER & LIGHT COMPANY
EXECUTIVE DEPARTMENT
DALLAS, TEXAS

August 11, 1917

Mr.W.N.Matthews, Po.496-44V,
Chairman, Nominating Committee,
The Jovian Order,
St.Louis, Mo.

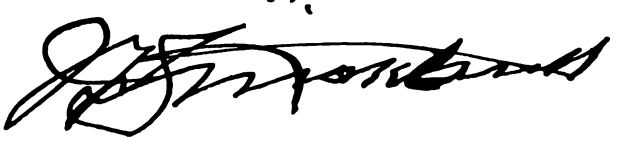
My dear Mr.Matthews:

I am deeply impressed with the honor that the Nominating Committee of THE JOVIAN ORDER has conferred upon me in placing my name in nomination as Jupiter to succeed that splendid type of a man, Mr.Henry L. Doherty of New York, who has done so much to bring about the successes of the public utilities in the United States.

This nomination has come to me quite unexpectedly, and while it will mean much extra work and a sacrifice of time, yet I am willing to make these sacrifices if they will redound to the upbuilding and future good of THE JOVIAN ORDER. I have noticed the rapid and splendid growth of the Order within the past few years. It has a surer foundation than ever before; and the "forward thinking" Jovian lives for the morrow by wholesomely living for the day, teaching a generosity of spirit for the future.

Again thanking you, as Chairman of the Nominating Committee of THE JOVIANS, for the honor above referred to, I am,

Yours sincerely,



Po.30

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

All matter for the news columns of The Jovian, and advertising copy, should reach the Central Offices not later than the tenth of each month

Advertising rates on application.

FIFTEENTH JOVIAN CONGRESS

Henry L. Doherty, Po. 3208-33, Fifteenth Jupiter, New York, N. Y.

District 1—Edward F. Hail, Po. 1924, Houston, Tex.
District 2—P. S. Klees, Po. 413, Hartford, Conn.
District 3—Jas. R. Pollock, Po. 18675, New York, N. Y.
District 4—William Gloeckner, Po. 2370V, Philadelphia, Pa.
District 5—W. J. Trott, Po. 2685, Grand Rapids, Mich.
District 6—C. D. Cabaniss, Po. 4453, Atlanta, Ga.
District 7—J. E. Cowles, Po. 1549V, Shreveport, La.
District 8—W. A. Burckhard, Po 1939, Norfolk, Va.
District 9—Martin J. Wolf, Po. 6027V, St. Louis, Mo.
District 10—E. W. Donoho, Po. 6049, Chicago, Ill.
District 11—J. I. Colwell, Po. 11229, Seattle, Wash.
District 12—John F. Greenawalt, Po. 2308, Denver, Colo.
District 13—Thomas E. Collins, Po. 9327, San Francisco, Cal.
District 14—P. T. Davies, Po. 8818, Montreal, Can.
District 15—George L. Guy, Po. 4727, Winnipeg, Man.

Ell C. Bennett, Po. 3932-13V, St. Louis, Mo.
In Charge of Central Offices.

PAST JUPITERS' ASSOCIATION, 1915-16.

President

C. W. HOBSON, Po. 1
Past Jupiter One, Dallas, Tex.

Vice-President

W. E. ROBERTSON, Po. 424-6V
Past Jupiter Six, Buffalo, N. Y.

Secretary-Treasurer

J. ROBERT CROUSE, Po. 260-8V
Past Jupiter Seven, Cleveland, Ohio.

H. F. MacGREGOR, Po. 21
Past Jupiter Two, Houston, Tex.

S. A. HOBSON, Po. 3V
Past Jupiter Three, Chicago, Ill.

C. A. NEWNING, Po. 2V
Past Jupiter Four, Houston, Tex.

H. B. KIRKLAND, Po. 285-5
Past Jupiter Five, Pittsburgh, Pa.

OSCAR C. TURNER, Po. 333-3V
Past Jupiter Eight, Chicago, Ill.

J. FRANK DOSTAL, Po. 1102V
Past Jupiter Nine, Colorado Springs, Colo.

ROBERT L. JAYNES, Po. 1421-50
Past Jupiter Ten, Massaponax, Va.

FRANK E. WATTS, Po. 1509-47
Past Jupiter Eleven, New York City.

W. N. MATTHEWS, Po. 496-44V
Past Jupiter Twelve, St. Louis, Mo.

HOMER E. NIESZ, Po. 306V
Past Jupiter Thirteen, Chicago, Ill.

THOS. A. WYNNE, Po. 11457V
Past Jupiter Fourteen, Indianapolis, Ind.

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LET YOUR LIGHT SHINE THAT OTHERS MAY BE GUIDED

THE VALUE of intensive and constructive co-operation can hardly be overestimated. It is a fundamental principle upon which all organization, whether it be governmental, commercial or social establishes its base for successful operation. To a great extent it means the subsidizing of individual usefulness for the benefit of others as well as oneself.

In a word, "co-operation" means practical adaptation of the Golden Rule.

Consequently co-operative movements promote harmonious activity, and, naturally, good-fellowship to the extent of the number benefited. Or, it might be well to say—to the number who realize such movements as the source from which they derive benefits.

It follows then, that a co-operative movement built to distribute benefits to the largest number of persons should receive the greatest amount of support.

Where the returns from co-operative movements are direct, or sufficiently so to be obvious to all beneficiaries, naturally the support is more zealous and there is less aptitude for dissention.

Where such returns are not always in evidence, directly, but are produced by a general improvement of conditions, brought about by some subtle process of harmonizing influences, changing methods of operation and eliminating antagonizing factors, no matter how general or how great the benefits that result, the task of obtaining proper credit for the organization that produces the benefits is seldom an easy one.

It would not be difficult to outline a large number of benefits that have resulted from the influence the Jovian Order has wielded in producing a state of harmony and a spirit of co-operation in the electrical industry if the members would read with their minds. If a history of the work the Order has accomplished through its Leagues could be so read in detail, and a comprehensive comparison of conditions prior to and following its activities be truly understood, some thousands of the rank and file of its membership would be amazed at the benefits that have resulted from its efforts.

In the respect of showing direct results, The Jovian Order occupies a difficult position. While the field for activity affords it opportunities to achieve benefits of great value to the industry as a whole, its work must often be that of support of other organizations. Consequently it must frequently be content with lending its aid to movements inaugurated by other organizations and bodies representing the different departments of the industry. Naturally the Order believes that so long as the results to be attained are of sufficient benefit, the question of honor and glory is one aside from the task to be achieved.

However, as the efficiency of any organization depends largely on the confidence it inspires, the distribution of the knowledge of the part it has played in promoting the interests of the electrical industry would be of benefit to The Jovian Order, in as much as it would inspire more enthusiasm in its membership for the work it undertakes in the future.

While reports that Jovian Leagues have taken an active part and rendered valuable aid in the support of movements both of an electrical and a civic nature are made frequently, and the valuable assistance the Leagues are rendering is understood at the Central Offices of the Order, a large majority of these reports are lacking in detail and data that would make the value of the work better understood by the membership.

All Jovian activities are of general interest to the fraternity, and if reported with sufficient amount of data they could be given publicity that would be of value as an inspiration and a guide to other Leagues and to the entire membership.

The idea is just this, if some beneficial work has been attained, those who are responsible should be given due credit and their achievement should be given publicity for the benefit of others.

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This is only possible when comprehensive reports of the work done are made to the Central Offices. Some one should be in charge of the publicity department of Jovian Leagues at all times. It means a great deal in arousing enthusiasm and in creating interest by keeping the whole membership informed as to what is being accomplished by the Order.

Jovianism is doing a great deal for the electrical industry,—far more than it is getting credit for owing, in a measure, to the lack of a proper amount of publicity.

The officers of Leagues, Congressmen, Statesmen-at-Large, Statesmen, Tribunes and members can render much assistance in eliminating this condition.

If your League or section has no regularly appointed publicity man, by agitating the matter of having one appointed, or by giving the Central Office a report of all Jovian activity in your territory, you will be rendering the fraternity valuable assistance.

Help us improve the publicity department and give Jovianism its due.

* * * *

SERVICES OF THE JOVIAN EMPLOYMENT BUREAU USED BY THE U. S. GOVERNMENT

A FEATURE showing the growth and development of the Jovian Free Employment Bureau, is the fact that the United States Government has availed itself of the services it offers, upon two different occasions recently, by listing openings.

While there is gratification in the fact that the Government has made use of the services of the Bureau, there is no occasion for surprise that it has done so. The Jovian Employment Bureau covers a distinct field of its own. There are few organizations in the country—it would be safe to say in the world—that are in as direct touch with so many men of the electrical industry, of special and technical training. It has listed in its files applications from men qualified to handle work of every nature characteristic of the industry, and its service has been extended to every part of the United States and Canada.

That our Government has recognized the advantages of obtaining technical and skilled men through its service substantiates the statements we have made as to the efficiency of this Jovian department. It indicates another step in usefulness to which the fraternity has advanced.

* * * *

VEGETABLE DIETS WILL AID IN FOOD CONSERVATION

IN HIS "Home Card" that is being widely distributed over the country, Herbert Hoover, United States Food Administrator, gives some pointed advice concerning the conservation of food that is of exceptional importance.

That there is a large shortage in the wheat crop this year is apparent. There is also a shortage of beef, pork and mutton, and of sugar. The shortage of these products will run high into the millions of bushels and pounds. But there should be nothing alarming in this condition if the people of the nation will set to work in earnest to overcome it.

It has frequently been stated by close observers, that as a nation we have acquired a habit of wastefulness that aggregates fully one-third of the harvested food we actually consume. This waste is noticeable among the products enumerated above. In regard to meat it is a well known fact that we eat far more than is good for our health, and a curtailment of its use would not only be "doing our bit" to aid our government but would be forming a habit personally beneficial. The same can be said of sugar. We use so much of the latter commodity that it is a wonder some of us are not granulated. For the most part it is merely a taste cultivated because of parental indulgence in childhood, and a little self restraint would produce a change that would be both profitable and enjoyable.

There are millions of people in America who refuse to eat anything but bread made of wheat. That, too, is a matter of cultivated taste. There is an equal amount of nutriment in bread made of corn and rye meal, and their occasional use aids digestion materially.

Mr. Hoover's admonition to eat more vegetables and fruits is well given, as we know that many tons of both are allowed to waste from decay in America each year. In fact, if it were possible to put to use all the fruit and vegetables that spoil in this country each fall and winter, the greatest part of the food problem of the earth would be solved.

Within the next sixty days a great deal of help can be given to aid the food situation if vegetables and fruits are used more freely for food, and the other products conserved. It is at this season that the prices of perishable fruits are the lowest. The markets are frequently overstocked, and an increased consumption will create inducements for the farmer to ship produce that would otherwise be allowed to waste.

* * * *

ADDRESS FOR CABLEGRAMS FROM ARMY AND NAVY MEN OVERSEA

THE NAVAL Communication Service has issued Cable Censorship Circular No. 7, giving the over-sea code address for cablegrams to families and business connections of military and naval personnel serving abroad:

Any person detailed to duty over-seas in the military or naval forces wishing to cable a member of his family or partner, or other business connection in the United States, in plain English should request authority through his commanding officer to have his address code word registered with the cable censorship. These requests should be forwarded direct to the chief cable censor, Navy Department, Washington, for record and registration. Requests from members of families, etc., will also receive attention if addressed to the chief cable censor.

The code word must consist of not more than ten letters and must be pronounceable. In addition, the full translation of the telegraphic address of the person for whom the cablegram is intended must be given the chief cable censor in making application; also the family or business relationship. Not more than one address will be authorized for each person in the military or naval service over-sea.

In case the code word chosen has not already been registered by another person it will be registered as requested. If not acceptable for any reason the applicant or his correspondent will be advised, and it will then be necessary to offer a new code word.

All cablegrams will be addressed "Censor, Newyork" and the registered code word will follow next as the first word of the message.

All such cablegrams must be prepaid to New York. They will be accepted from the cable companies by the New York censor and will be put on the land telegraph lines with the registered telegraphic address translated from the registered code word and forwarded "collect."

Cablegrams in both directions must be restricted to cases of dire necessity where they will provoke effective action on account of the congested condition of the Atlantic cables.

* * * * Chief Cable Censor

MINING ENGINEERS TO MEET AT ST. LOUIS IN OCTOBER

MEMBERS and delegates of the American Institute of Mining Engineers will hold a meeting in St. Louis, Mo., during the week of October 8 to 15. Announcement of the program includes, besides several sessions to be held in St. Louis, a number of inspection trips to cities in the Southwest. Included in the inspection tour are the cities of Joplin, Mo., and Tulsa, Okla. The mines at the former point and the oil fields of the latter will be visited.

Methods will be discussed for conserving the supply and increasing the output of the country's minerals and oil, with the object of aiding the nation in winning the war.

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JOVIAN ANNUAL

NEW YORK CITY - OCTOBER

Convention City and Date New York City was decided upon as the Convention city by Jupiter Doherty because of the large Jovian membership there, in Philadelphia and other near-by cities, thus decreasing the difficulty of securing the necessary quorum to transact business.

It was believed essential to allow this sole consideration to determine the choice of the city, in order to discount the fact that under existing conditions Convention attendance is considerably below normal.

October 22-23 (Monday and Tuesday) were selected in order to not conflict with the convention of the National Electrical Contractors Association, and to allow one portion of the trip to be made on a holiday.

Character of the Meeting We are a unit in our belief that the Jovian Convention should truthfully reflect that patriotic spirit of our great Order and industry, which inspires us to devote our time and energies to serious-minded welding of all our resources, into an instrument of constructive power, for the assistance of our country in its hour of need.

It is, therefore, only right and proper, and has been so determined, that this gathering of representative men shall labor intensively to conclude the necessary business of the meeting in the shortest possible time, uninterrupted by the elaborate entertainment that has marked the previous annual Jovian assemblies.

The Convention will, as of old, and as no other convention does, furnish a common ground upon which shall gather all branches in the electrical field for the charting of co-operative effort to advance those endeavors which affect the industry as a whole.

At no other period in the history of electrical development has it been as necessary as it is today that each branch of the industry recognize in a practical manner its inter-dependence with relation to all other branches, and the necessity for co-ordinated effort.

In appreciation of the wonderful vehicle afforded by The Jovian Order to develop to the maximum degree this spirit of intercommunion between all divisions of the industry, a specific, thoroughly workable plan will be presented for the consideration of the Convention, whereby Jovianism may be immediately employed for this helpful purpose.

Importance of Meeting This Convention is of utmost importance. There will be presented for its acceptance or rejection extremely vital changes in the existing method of operation of The Jovian Order.

It is the belief of not an inconsiderable number of Jovians that upon the passage of some or all of the proposed amendments depends the future upward progress of the Order. Let all members see to it that they earn the right to pass upon the work of others by not neglecting their own duty in helping frame the Order's laws of procedure. This can only be done by attendance at the annual meeting, it can not be done by criticism AFTER the meeting.

It is needful to place especial emphasis upon this fact—no amendment can be acted upon unless not less than two hundred Jovians in good standing are present at the meeting at which the the amendment is voted. That number

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CONVENTION

22-23 - HOTEL McALPIN

is specified by the Jovian Constitution as the required quorum.

To secure this quorum it is imperative that every Jovian who can possible attend, even at some personal sacrifice, must do so. There will be much in the Convention itself that will make the effort worth while, and there are few who can not find within New York City many ways in which to employ profitably a few extra hours afforded by the trip.

Program The program will include addresses by capable speakers of national and international fame on subjects bearing upon the newer problems of our industry induced by the European conflict. Throughout the business of the meeting and in a number of specific ways a note of patriotism will mark the loyalty of our splendid body. The Convention will close on Tuesday evening with a simple dinner where the fine old spirit of Jovianism will give welcome to the newly elected officers of the Order.

Headquarters The headquarters of the Convention will be the Hotel McAlpin, Thirty-Fourth and Broadway, where all the business of the meeting will be transacted and the closing dinner served.

Transportation No special arrangements have been made for transportation. It will be advisable for delegates to make Pullman reservations at the earliest moment practicable. Due to decreasing the number of sleeping cars, previously run on all lines, an eleventh-hour attempt to secure accommodation will seldom yield a lower berth, compartment or drawing-room.

Hotel Accommodation and Rates Members will confer a favor upon the Hotel Committee and will assure their own comfort if they will immediately (if it is impossible at this moment, then at the earliest opportunity) advise if accommodation is desired. This is not simply a courtesy, IT IS NECESSARY IN ORDER TO PROPERLY CARE FOR DELEGATES.

Members will find it much more satisfactory to stop at the hotel in which the Convention is to be held—Hotel McAlpin, although reservations will be made by the committee at any other hotel desired, IF the request comes early enough.

Rates at the McAlpin will be: Single room, with bath, from $3 up; double room, with bath, from $4 up; rooms, without bath, from $2.50 up.

Send all reservations to Frank E. Watts, 30 Church Street, New York City, chairman, Hotel Committee.

Registration Registration will be in the Hotel McAlpin, together with all other Convention business.

NO REGISTRATION FEE WILL BE CHARGED.

For further information address:

THE JOVIAN ORDER,
SYNDICATE TRUST BUILDING, ST. LOUIS

FILL OUT, CUT OUT AND MAIL TODAY TO

Mr. FRANK E. WATTS,
30 Church Street, New York City

Reserve for the undersigned at Hotel .....

..... **Rooms** {**with Bath** / **without Bath for** ..... **persons**

at rate of $ ..... **to be occupied beginning**

(Date of Arrival) .....

Name .....

Address .....

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NOMINATIONS FOR THE 16TH JOVIAN ADMINISTRATION

REGULAR TICKET

NOMINATED BY THE OFFICIAL NOMINATING COMMITTEE

W. N. MATTHEWS, Po. 496-44V, St. Louis, Chairman.
CHARLES W. HOBSON, Po. 1, Dallas.
E. FREEMAN, Po. 7178, Chicago.
JOHN A. BRITTON, Po. 7380, San Francisco.

SIXTEENTH JUPITER
J. F. STRICKLAND, Po. 30,
Texas Power & Light Company, Dallas, Texas.

SIXTEENTH MERCURY
ELL C. BENNETT, Po. 3932-13V,
St. Louis, Mo.

SIXTEENTH CONGRESS

DISTRICT No. 1
WILLIAM R. PHIPPS, Po. 10676,
Brush Electric Company, Galveston, Texas.

DISTRICT No. 2
JOSEPH INSULL, Po. 16729,
General Electric Company, Pittsfield, Mass.

DISTRICT No. 3
HARRY W. ALEXANDER, Po. 17191,
care Society for Electrical Development, New York City.

DISTRICT No. 4
ARTHUR G. PIERCE, Po. 2896,
Cutler -Hammer Manufacturing Company, Pittsburgh, Pa.

DISTRICT No. 5
ROBERT MONTGOMERY, Po. 6147,
Louisville Gas & Electric Company, Louisville, Ky.

DISTRICT No. 6
JULIEN BINFORD, Jr., Po. 1174V,
Westinghouse Lamp Company, Atlanta, Ga.

DISTRICT No. 7
W. R. POWER, Po. 2784,
Consolidated Heat, Light & Power Company, Huntington, W. Va.

DISTRICT No. 8
GALEN CROW, Po. 925,
Public Service Company of Oklahoma, Guthrie, Okla.

DISTRICT No. 9
L. O. RIPLEY, Po. 7042V,
Kansas Gas & Electric Company, Wichita, Kan.

DISTRICT No. 10
HENRY N. REMINGTON, Po. 678V,
Central Illinois Light Company, Peoria, Ill.
L. C. SPAKE, Po. 15397V
Western Editor, McGraw-Hill Pub., Chicago, Ill.

DISTRICT No. 11
WILLIAM T. WALLACE, Po. 1716,
Idaho Power Company, Boise, Idaho.

DISTRICT No. 12
H. L. WOOLFENDEN, Po. 1062V,
Allis Chalmers Company, Denver, Colo.

DISTRICT No. 13
J. N. COLKITT, Po. 2627,
John A. Roeblings' Sons Company of California, Los Angeles, Cal.

DISTRICT No. 14—Vacant.

DISTRICT No. 15—Vacant.

STATESMEN

ARKANSAS
C. J. GRIFFITH, Po. 13901,
Little Rock Railway & Electric Company, Little Rock, Ark.

ARIZONA, CALIFORNIA, NEVADA
LEWIS E. SPERRY, Po. 9415,
New York Insulated Wire Company, San Francisco, Cal.

IDAHO
ERNEST C. KIERSTED, Po. 10258,
Care Idaho Power Company, Twin Falls, Idaho

IOWA
H. W. GARNER, Po. 19507,
Des Moines Electric Company, Des Moines, Iowa.

INDIANA
WALLACE O. LEE, Po. 11440,
Indianapolis Light, Heat & Power Company, Indianapolis, Ind.

KENTUCKY
J. B. RILEY, Po. 5297,
Westinghouse Lamp Company, Louisville, Ky.

LOUISIANA
W. A. PORTEOUS, Po. 9226,
care Western Union Telegraph Company, New Orleans, La.

MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA
W. H. VILETT, Po. 3675V,
Sterling Electric Company, Minneapolis, Minn.

MARYLAND
J. G. LIVINGSTON, Po. 1721,
care Southern Electric Company, Baltimore, Md.

MASSACHUSETTS
C. B. BURLEIGH, Po. 398,
Care General Electric Company, Boston, Mass.

MISSOURI
FRED JOHNSON, Po. 177V,
Wagner Electric Manufacturing Company, St. Louis, Mo.

NEW JERSEY, DELAWARE
H. C. STERLING, Po. 11014,
Atlantic City Electric Company, Atlantic City, N. J.

STATESMEN—Continued

NEW MEXICO
J. A SHEPARD, Po. 16106,
care Deming Ice & Electric Company, Deming, N. M.

NEW YORK
E. G. HINES, Po. 16222,
Electrical World, 239 West Thirty-Ninth Street, New York, N. Y.

OHIO
J. M. BATEMAN, Po. 2610V,
Western Electric Company, Cleveland, Ohio.

OKLAHOMA
CHARLES McCALLUM, Po. 3394,
Western Electric Company, Oklahoma City, Okla.

OREGON
A. S. MOODY, Po. 4576,
Care Pacific States Electric Company, Portland, Oregon

RHODE ISLAND
E. R. DAVENPORT, Po. 8019,
Care Narragansett Electric Light Company, Providence, R. I.

SOUTH CAROLINA
W. W. FULLER, Po. 16462,
Care of Isle of Palms Traction Company, Charleston, S. C.

TENNESSEE
C. J. R. WATSON, Jr., Po. 2131V,
care Electric Supply Company, Memphis, Tenn.

TEXAS
HIRAM O. CLARK, Po. 6629,
Houston Lighting & Power Company, Houston, Texas.

UTAH
CHAS. H. TALMAGE, Po. 1431,
care Western Electric Company, Salt Lake City, Utah.

VERMONT
E. E. LARABEE, Po. 1145,
Care Twin States Gas & Electric Company, Bennington, Vermont

VIRGINIA
GUY E. SILER, Po. 7479,
Care Virginia Railway & Power Company, Richmond, Va.

WISCONSIN
CARL GOLIN, Po. 12385V,
Northwestern Storage Battery Company, Milwaukee, Wis.

PROVINCE OF ALBERTA
NORMAN S. RICHARDS, Po. 8985,
Care Northern Electric Company, Calgary, Alberta

PROVINCE OF MANITOBA
J. H. SCHUMACHER, Po. 4742,
Care Schumacher-Gray Company, Ltd., Winnipeg, Manitoba

PROVINCE OF QUEBEC
E. N. HYDE, Po. 1614,
Care Northern Electric & Manufacturing Co., Ltd., Montreal, Quebec

(NOTE.—The chairman of the Nominating Committee states that Congressional Districts numbered 3, 14 and 15, and those states not covered by nominations in the above list, are being carefully canvassed, and will be covered by nominations at an early date).

ADDITIONAL NOMINATIONS

The Jovian Constitution provides that, in addition to the "Regular Ticket" selected by the Nominating Committee, any member in good standing may be nominated for any elective office (provided that he is not disqualified by some provision of this Constitution) by a petition signed by not less than one hundred members in good standing, provided that such petition or petitions must be delivered to Mercury not later than the first day of September. Mercury shall publish such nomination, or nominations, in each issue of the Jovian official publication prior to the then next Annual Convention under the heading: "Independent Ticket, Nominated by Petition."

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY ELECTS OFFICERS—DECLARES $375,000 DIVIDEND FOR RED CROSS

AT A RECENT meeting of the board of directors of the Westinghouse Electric & Manufacturing Company, held in New York City, the following officers were elected for the ensuing year: Guy E. Trip, Po. 143, chairman of the board; E. M. Herr, Honorary, president; L. A. Osborne, Po. 3280-38, Chas. A. Terry, Po. 12039, H. P. Daivs, H. D. Schute, Po. 6369, H. T. Herr and Walter Cary, vice-presidents; T. P. Gaylord, Po. 10167, acting vice-president; Jas. C. Bennett, controller and secretary; Warren H. Jones, assistant secretary; H. F. Baetz, treasurer and assistant secretary; S. H. Anderson, assistant treasurer and assistant secretary; L. W. Lyon, assistant treasurer; F. E. Craig, auditor; W. B. Covil, Jr., and W. J. Patterson, Po. 6374, assistant auditors.

In addition to declaring a regular quarterly dividend of one and three-fourth per cent, both on the common and preferred stock of the company, the board declared a dividend of one-half and one per cent on both common and preferred stock, amounting to $375,000, for the benefit of the Red Cross.

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Personal Pointers

A fellow may be far from well,
Or business have him in a fret,
But let a friend just start to tell
About old times and he'll forget
His troubles, or his "rheumatics."
And if the friend has known him long,
And tells about some boyhood tricks
He'll maybe laugh or sing a song.

* * * *

A. H. Halloran, Po. 1291, formerly managing editor of the Journal of Electricity, San Francisco, has been appointed assistant business manager of that magazine.

* * * *

W. S. Pedley, Po. 12831, First Tribune, Plattville, Wis., has enlisted in the army. The office of Tribune at that point is open pending an appointment of his successor.

* * * *

P. Lloyd Lewis, Po. 6018V, president of the Kansas City League, and one of the most enthusiastic and active Jovians in the Middle West, is the proud father of a baby girl.

* * * *

Carol O. Nichols, Po. 15537, president of the Southwestern Michigan Jovian League, of Benton Harbor, Mich., has enlisted in the Naval Reserves and is somewhere in the East.

* * * *

H. K. Fish, Po. 1626, formerly associated with the Western Electric Company at Los Angeles, is now in charge of the electrical department of Fairbanks Morse & Company, San Francisco.

* * * *

Charles W. Forbrich, Po. 10162, who recently resigned his position with the Electrical Review Publishing Company, Chicago, has rejoined the staff of that magazine in a more important position.

* * * *

H. B. Peirce, Po. 7235, has resigned his position as assistant commercial agent of the Washington Water Power Company, Spokane, Wash., to engage in commercial and engineering activity in Russia.

* * * *

T. J. Fleischer, Po. 2884, until recently representative for the Crouse-Hinds Company in Ohio territory, has been transferred to the eastern district of the company, with headquarters at New York City.

* * * *

J. W. Campbell, Jr., Po. 18386, continues as manager of the Minnesota Valley Light & Power Company, at Montevido, Minn., under the control of the Northern States Power Company, which recently acquired the property.

* * * *

W. L. Weston, Po. 2215, who was until recently in charge of the Paducah (Ky.) Light & Power Company, has been transferred to Houghton, Mich., and given the management of the Stone & Webster utilities at that point.

* * * *

Montague Ferry, Po. 14145, formerly Commissioner of Public Service, Chicago, and later in the employ of the B. F. Goodrich Company, Akron, Ohio, is now production manager of the Curtiss Aeroplane Company, at Buffalo, N. Y.

* * * *

Claude G. Matthews, Po. 10662, has recently been transferred from the Dallas (Texas) office of the Western Electric Company to the San Antonio office of that company. His headquarters are at 344 Moore Building, San Antonio.

J. I. COLWELL, Po. 11229, Fifteenth Amphion, of Seattle, Wash., manager of the Portland-Seattle branch of the Western Electric Company, who has supervision over Jovian activities in the Northwest

J. W. Wright, Po. 18299, formerly foreman of the meter department of the Port Arthur Light & Power Company, is now connected with the electrical drafting department of the Dayton Engineering Laboratories Company, Dayton, Ohio.

* * * *

J. B. Shickel, Po. 17561, formerly with the General Electric Company, was recently made superintendent and electrical engineer of the Menominee & Marinette Light & Traction Company, Menominee, with headquarters at Menominee, Mich.

* * * *

T. B. Wilson, Po. 16689, secretary of the Louisville (Ky.) Gas & Electric Company, has assumed the management of the company during the absence of Robert Montgomery, Po. 6147, who is at the officers' training camp at Fort Benjamin Harrison.

* * * *

Homer E. Niesz, Po. 306V, Past Jupiter Thirteen, secretary, Budget and Expense Committee, Commonwealth Edison Company Chicago, has been assigned the duties formerly handled by Major P. Junkersfeld, during the latter's absence in active service.

* * * *

George W. Steenberg, Po. 13172, has resigned as assistant treasurer of the Electrical Review and Western Electrician, of Chicago, to accept a position as special representative of the metal-cutting saw department of E. C. Atkins & Company, Indianapolis.

* * * *

F. D. Nims, Po. 4685, is now connected with the Northwest Electric & Water Works, Montesano, Wash., with headquarters at Seattle. Jovian Nims was formerly engineer and assistant general manager of the Olympia Power Company, of Port Angeles, Wash.

* * * *

W. H. Quirk, Po. 12123, formerly stores manager for the Western Electric Company at Dallas, Texas, and later stores manager at Cleveland, has recently been transferred to Cincinnati and made manager of the Western Electric Company's branch at that point.

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EARL A. BRUNSWICK, Po. 9658, salesman, Western Electric Company, Cleveland, O. Now a member of Uncle Sam's fighting forces. "Somebody has to be the private don't they?" said Jovian Brunswick. So he enlisted.

L. J. TODHUNTER, Po. 3509, has been appointed manager of the electrical department of Herr-Rubincam Supply Company, Denver, Colo. He was formerly assistant manager of the electrical department of the Hendrie & Bolthoff Manufacturing & Supply Company.

* * * *

ALLAN J. CALLAWAY, Po. 16936, buyer for the San Francisco branch of the Western Electric Company, has been commissioned a first lieutenant of the A. T. & T. Telegraph Battalion, and is now located at the Monterey encampment where he is acting as supply officer of his battalion.

* * * *

ADRAIN TOBIAS, Po. 3999V, until recently superintendent of the meter department of the Mahoning & Shenango Railway & Light Company, Youngstown, Ohio, a position he has filled since 1915, has returned to the Westinghouse Electric & Manufacturing Company, at East Pittsburgh, Pa.

* * * *

W. A. BITTNER, Po. 8302, has resigned as purchasing agent with the Union Electric Company of Pittsburgh, to engage in the manufacturing business. He is associated with RALPH C. SPERRY, Po. 4368, who until recently was Pittsburgh district manager of the Brilliant Lamp Division of the National Lamp Works. The style of their firm is Sperry & Bittner.

* * * *

EDWARD L. FRANTZ, Po. 5619, vice-president and general manager of the Frantz-Premier Company of Cleveland, has disposed of his holdings and severed his connection with that company. Jovian Frantz was the founder of the company and one of the pioneers in the vacuum cleaner industry. He contemplates taking a vacation, before considering other activities.

* * * *

ROBERT MONTGOMERY, Po. 6147, Statesman-at-Large, manager, Louisville (Ky.) Gas & Electric Company, passed the examination for admission to the next officers training camp, and reported at Fort Benjamin Harrison, August 27. Jovian Montgomery failed to pass the physical test for the first camp, but after a course of training had no trouble in passing the second time.

* * * *

FRED M. LEGE, Jr., Po. 131, formerly manager Brush Electric Light & Power Company, Galveston, Texas, has been elected president of the Terrell Electric Light Company, Terrell, Texas, a property recently acquired by Fred M. Lege, Sr. KENNETH M. MASON, Po. 1069, formerly secretary and treasurer of the Brush Electric Light & Power Company, is vice-president, secretary and treasurer of the Terrell utility.

R. D. LONG, Po. 10503, formerly manager of the Muskogee Electric Traction Company, has been appointed manager of the Shawnee-Tecumseh Traction Company of Oklahoma.

* * * *

J. F. USENER, Po. 17967, has been appointed chief engineer of the Galveston-Houston Electric Railway. He succeeds A. C. LEARMOUTH, Po. 10651, who has become chief engineer of the Stone & Webster plants at El Paso. Jovian Usener was formerly chief engineer of power stations for the Houston Electric Company.

* * * *

O. H. HUTCHINGS, Po. 12350, who was elected president of the Ohio Electric Light Association is engineer and associate general manager of the Dayton Power & Light Company, Dayton, Ohio. Jovian Hutchings has been active in association work for a number of years. He is also identified with the National Electric Light Association and the American Institute of Electrical Engineers.

* * * *

HARRY C. TURNOCK, Po. 5658V, president and general manager, Electric Construction & Sales Company, Cleveland, has been commissioned a first lieutenant, and is now in the Coast Defense Artillery, with headquarters at Fortress Munroe, Va. Judging from Jovian Turnock's work in connection with the "Hundred Point Committee" and other Jovian activities, Uncle Sam has added another real "go-getter" to his forces.

* * * *

E. A. WILCOX, Po. 6830V, First Tribune, manager of the Public Service Company, Tulsa, Okla., was elected president of the recently organized Tulsa Advertising Club. Jovian Wilcox has taken an active part in civic matters since going to Tulsa about a year ago, that has contributed greatly to the commercial activity of the city. His work in promoting a greater interest in Jovianism in Tulsa has been very successful.

* * * *

H. ALEX HIBBARD, Po. 1109, Thirteenth Atlas, electrical sales engineer, with offices 305 Century Building, Denver, has just completed arrangements to assume the general sales agency for the T. & W. Universal Plug Company of Santa Ana, Cal. While the output of the concern is rather small at present, Jovian Hibbard has a great deal of confidence in their products and expects to show a great increase in their sales. He is also sales representative for a number of other firms such as the Tarentum Glass Company, Gill Glass Company, Illinois Wire & Cable Company, the Faultless Anchor Company, and other concerns. Besides having been Congressman for his district during the thirteenth administration, Jovian Hibbard has been an active Jovian ever since his affiliation with the Order.

* * * *

D. ROY BLAICHER, Po. 11826, purchasing agent for the Minneapolis General Electric Company, has been called to Washington, D. C., to serve as a member of the Board of Buyers for the Government. Jovian Blaicher's work has given him a wide experience in electrical lines. He will have charge of all purchases of electrical equipment and apparatus for the numerous branches of the Government. Before his connection with the Minneapolis General Electric, he was formerly purchasing agent for the Baldwin Locomotive Company, Pittsburgh; later going with the General Electric Company, at Schenectady, N. Y. In 1907 he became purchasing agent for the Toronto Electric Light Company, and was later in charge of the purchasing departments of the Toronto Street Railway Company and the Toronto Power Company. He has been connected with the Minneapolis General Electric Company since 1913. He also had supervision over the buying of all material for the Northern States Power Company.

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THE POSSE IS CALLED
July 20, 1917

By C. A. Newning

AWAKE! ye men of the nation!
There's a right smart scrap on hand,
And we've heard from the Lord High Sheriff
With a short, sharp, shrill command.

A posse is called to assemble,
A mere two millions or so—
It's quite the biggest thing, so far,
Any sheriff has been called on to do.

Like a trouble—born since the sunset—
Is met by a posse at night,
And a quiet suburban village
Is saved by that posse's good fight;

So now, with the war storm upon us,
Which has caught us so much unawares
We must gather our hosts to combat it,
Forgetting all other affairs.

Out here on the old Texas prairie,
Conscription has long been the rule.
A sheriff don't wait on opinion
That is offered by coward or fool.

He just gets busy with orders,
And executes them there on the spot,
And the posse follows him fawning,
Whether it likes the business or not.

There's many a good old lesson
To be learned from plainsman's ways;
And the ruthless call for a posse
Was the glory of early days.

Not a man that dared to refuse it,
Be he indolent, coward or what.
A sheriff never issued a ukase
That was not obeyed on the spot.

And so it is now with the nation—
Face to face with the world's fiercest storm—
And the boys in the "KAKI" are coming—
And with them an epoch is born.

—From The Southwestern Electrician.

WINNIPEG PICNICS AND ARRANGES FOR ELECTRICAL SHOW

THE ANNUAL picnic of the Winnipeg Jovian League was held at Grand Beach, on Saturday, August 4. The members and their friends, making a large party, made the seventy-mile trip on on a special "Jovian" train.

Ideal weather for the outing prevailed, and the delightful program of sports that had been arranged was carried out on the splendid athletic grounds at Grand Beach, with a great deal of enthusiasm.

Thirty-four prizes, donated by electrical firms of Winnipeg, were awarded in the contests, and each of the events, beginning with a fat ladies' race and ending with a tug of war, between Jovians and the Winnipeg Fire Department were keenly enjoyed.

Arrangements were perfected for the electrical show held at the Alhambra during the first week of September.

Here are the members of the Joint Committee of the New York Jovian League. The reason they were all in such a good humor was because they were snapped at play while at the League's annual outing at the Harlem Yacht Club. Left to right they are: J. Wynne Jones, Po. 18664, secretary; B. J. Alpin; Warren Hinchcliffe, Po. 18562; W. T. Dipple, Po. 18657; J. H. Betts, Po. 6765V, Fourteenth Vulcan, and P. J. Schneider, Po. 18676

The idea of holding an exclusive electrical show in Winnipeg was originated by the Jovian League. The one held last year under the joint auspices of the Winnipeg Industrial Bureau and the Winnipeg Jovian League proved a great success.

This year the electrical show was under the management of a committee of twenty men, representing the various electrical interests of the city, and where it was not directly under the auspices of the League, practically all of the committee are Jovians.

An admission fee of ten cents was charged, and as members of the general committee donated their services, it is felt that a surplus will be realized. This will be donated to patriotic purposes. Full account of the show will be given in the next issue.

* * * *

MANSFIELD REJUVENATION

FIRST TRIBUNE Jas. A. Stone, Po. 19724, who holds the high commission from the court of Jove over the jurisdiction of Mansfield, Ohio, called together all loyal subjects of Jovianism in his domain on the Evening of July 12, designating the Eagles' Club as the point for assembling. The purpose of this tribunal meeting was that of passing judgment on twenty-one satellites that had been found wandering aimlessly in the great forest of doubt adjacent to the radiant preserves of Jovian enlightenment.

Seventy true and tried warriers, together with their chieftains responded enthusisatically to the call, and at the sound of the ominous signal that rumbled down from Mount Olympus at exactly 8 o'clock, were assembled to pass judgment upon the captives.

Of course there were features connected with the gathering of the clansmen that were not so "ominous." There were times when even the candidates forgot the heavy chains with which they were manacled, and joined in the festivities unrestrained by the fear of any impending doom.

Among those who came from a distance to participate in the event was R. S. Dunning, Po. 16471, secretary of the Cleveland League. Jovian Dunning made the principal address of the evening.

E. F. Wickwire, Po. 15431, presided as toastmaster.

Jovians who, from reports, will be recommended to the Most High Jove for honors, deserved by their valient activities in contributing to the success of the Rejuvenation are George A. Ralston, Po. 19750; Joseph Parrott, Po. 19723, Second Tribune, and H. Scott Robeson, Po. 13200.

After the candidates had stood the severe tests to which they were subjected, they were turned over to the Degree Team composed of the following members: Jupiter, C. C. Beck, Po. 13537; Neptune, C. S. Willias, Po. 19757; Pluto, R. F. Wise, Po. 15432; Vulcan, G. W. Strong, Po. 19755; Mercury, Fred W. Godfrey, Po. 271; Hercules, H. S. Robinson, Po. 13200; Mars, F. C. Poling, Po. 15317, and Apollo, J. H. Parrott, Po. 19723.

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E. H. HAUGHTON, Po. 278

OBITUARY

ERNEST H. HAUGHTON, Po. 278, president of the Bryan-Marsh works of the General Electric Company, of Chicago, and his wife, met their death in an automobile accident in the Adirondack Mountains August 22.

Jovian Haughton had been affiliated with the Order for over eleven years, having been initiated at the Rejuvenation held at Chicago, January 26, 1906. He was a graduate of the University of Nebraska, Class of 1895, and started his career as an inspector with the Underwriters' Electrical Testing Laboratories. He entered the incandescent lamp field in 1901. In 1902 he became manager of the Bryan-Marsh Company's Cincinnati branch and was given charge of the Chicago branch in 1904.

The JOVIAN is in receipt of the following expression from one who was closely affiliated in a business way with Jovian Haughton, and believes it to be an accurate word-picture of his unusual and thoroughly lovable personality:

"Mr. Haughton, who was known to his friends in the electrical business as "Ernie," was the possessor of a strong, distinct personality. In his college days, a baseball athlete (his cousin is Percy D. Haughton, the Harvard football coach), he never lost a certain strain of vigorous exuberance which was not always understood by those who did not know him, but to his many friends was merely his way of 'working off steam.' Paradoxically enough, he was one of the tenderest of men; his affection for his business associates was one of his noblest traits. Probably every one who attended the summer conferences of the incandescent lamp manufacturers at Association Island, New York, will remember Mr. Haughton's reputation as a writer of songs that have done so much to establish a feeling of co-operation and good-fellowship in the electrical manufacturing industry."

The funeral of Jovian Haughton and his wife was held from the home of the latter's father, Judge Yeaman, at Henderson, Ky., at two o'clock, August 28. Memorial services were held in East Cleveland, at the Presbyterian Church at the same hour.

Jovian Haughton and his wife leave two children, Julia and Erenstine, to whom The JOVIAN offers the sympathy and condolences of the Order.

DOMESTIC CONDITIONS AFFECTED BY THE WAR

THE DEPARTMENT of Agriculture authorizes the following: Agents of the Department of Agriculture will leave Washington this week (August 20) for Texas and the South Atlantic states in order to prepare the way for the transfer of thousands of head of cattle from the dry lands of Texas to the winter grazing regions of the southern states east of the Mississippi. * * * * Experts of the department estimate that this transfer of cattle from the dry regions, where they have to be fed grains, to the rich winter grazing regions will effect a saving of millions of bushels of feedstuffs and will rescue many cattle from starvation.—Official Bulletin.

* * * *

Dates of mobilizations have been changed by Provost Marshal General Crowder. In a wire to the governors of all states the following mobilization orders were given: First 30 per cent, September 3; second 30 per cent, September 19; third 30 per cent, October 3.

* * * *

According to figures given out by the Food Administration, the wheat deficit in the United States and Canada for the year is 400,000,000 bushels. The figures are based upon an estimate of the demand that will come from our allies and from neutral countries. While the administration considers the situation one of concern, it proposes to meet it by eliminating all waste, and the conservation of the supply by the substitution of other foods.

August 21 the Federal Trade Commission submitted to the Senate its report on the investigation of the book paper industry. It shows that the margin of profits increased in some cases as much as 1000 per cent in 1916 over 1915.

* * * *

According to statistics issued by the Food Administration there has been a decrease of 115,005,000 meat producing animals in the world since the beginning of the European war. While the increase of cattle in the United States during that period has been 7,900,000, there has been a total decrease in the world of 28,080,000. Sheep show a decrease of 3,000,000 in the United States and 54,500,000 in the world. In the United States hogs increased 6,275,000, but decreased 32,425,000 in the world supply.

STOP A MINUTE AND CONSIDER

Do you know where you can invest four dollars and get thirteen dollars worth of service for it?

Do you know where you can get thirteen dollars worth of additional service for four dollars you have previously been willing to invest without such service?

Well, that is just exactly what the Jovian Order is offering to do for its members who are in good standing.

It offers to do more. It stands ready to deliver as much as forty-one dollars worth of insurance service to each member in good standing.

Read about this benefit on pages 18 and 19.

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MINNEAPOLIS LEAGUE HOLDS BIG ELECTRICAL SHOW

MEMBERS of the Minneapolis Jovian League perfected arrangements for an electrical show held in connection with the Minnesota State Fair in that city September 3 to 8, inclusive.

This was the first time a complete electrical show has been held during the fair, and the committees worked diligently to make it a big success. They acquired the entire ground floor of the building formerly known as the Industrial Building. The space measures 40 x 200 feet all of which was utilized by electrical firms.

The entire building is under the management of the League, which rented it from the State Fair Association. The space was sold to local electrical concerns who participated in the exhibit.

Under the plan as outlined, it was arranged in a manner to present the appearance of one large exhibit instead of dividing it into individual display booths.

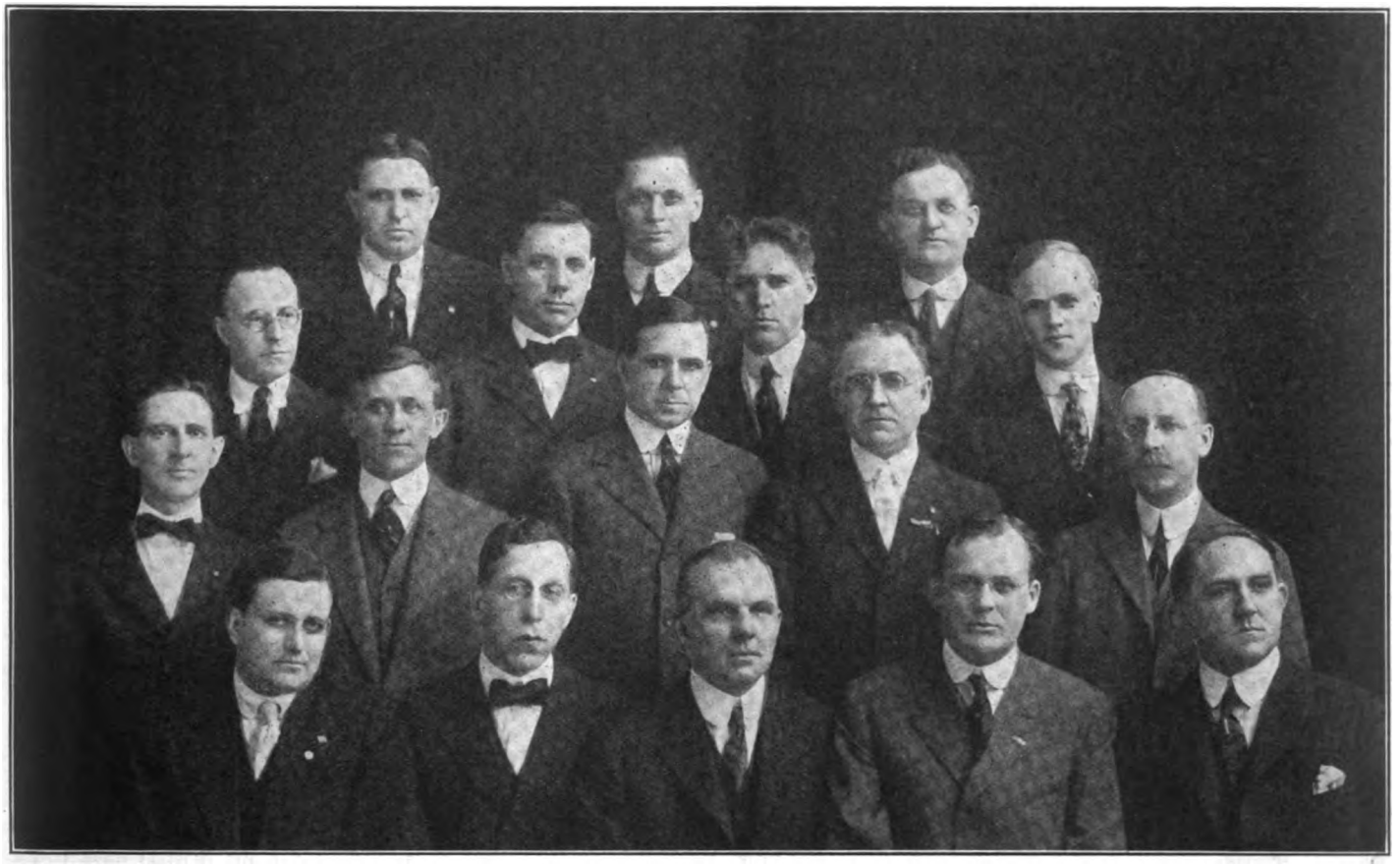
A resume of the activities of the Minneapolis League during the past year show that in spite of war conditions Jovianism has not suffered any relax in its work in that section.

In addition to the regular luncheon meetings a number of evening meetings were held during the season, with an average attendance of over 125 members.

At one of these banquets the attendance was over 400, and 225 new members were added to the League's roster, upon that occasion.

League luncheons and banquet meetings will be resumed in September, immediately following the electrical show, and a number of movements will be inaugurated.

A complete report of the electrical show has not reached The JOVIAN at the time of going to press, and will be given in its next issue.



Seventeen members of the General Committee of Minneapolis Chartered Jovian League No. 4. Left to right, lower row: M. V. Rutherford, Po. 6094; H. J. Meyer, Po. 7365; Oce Curtis, Po. 11830, president; Paul Joyslin, Po. 1264; R. M. Laird, Po. 5164. Second Row: Chas. S. Hotchkiss, Po. 9149; W. H. Reker, Po. 6092; W. E. Stephenson, Po. 690; F. G. Dustin, Po. 7811; E. M. Conant, Po. 16200. Third row: T. H. Kettle, Po. 18413; T. W. Findlay, Po. 3667V; Emil Anderson, Po. 7805, president; G. S. Blomgren, Po. 6038V, treasurer. Top row: W. H. Vilett, Po. 3675V: O. M. Frykman, Po. 7814 and Norman O'Neill, Po. 18425, secretary.

There Is a Big Difference in the cost of selling insurance retail and wholesale. An agent who sells one accident policy each day makes a fairly good salary. If he sells one in two days he can make a living. Of course, he earns all he gets, but the cost of selling has to be figured into the rate charged.

THE JOVIAN CENTRAL OFFICE has assumed the service of placing insurance in order to save Jovian members the selling-cost. It has arranged with a first-class company to buy insurance less that expense and act as wholesale distributer. By using the Order's medium for advertising the insurance to members of the Order; by having the Order's office force at the Central Office do the work, and using its other facilities, there is not one cent added to the cost.

THAT IS THE REASON YOU GET THE INSURANCE AT WHOLESALE AND KEEP THE SELLING EXPENSE IN YOUR POCKET. Read about it on pages 18 and 19.

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Is Your Policy Punct
Are

Don't Say "No" Unless You KNOW and

Listen! Would you be surprised to know that unless you are covered by JOVIAN Accident and Health Policies one or both of the above applies to your present insurance?

Awaken! Then you will have to be surprised, for that is a correct statement of fact. Don't take our word for it, don't take any Agent's word for it, use your own brains applied to the evidence submitted to you. The JOVIAN evidence is ready—a word from you will bring it on the run. Set it going today!

Read! If you have a policy with the same principal sum as the JOVIAN policy which costs you less or approximately the same, then, positively it is punctured with exceptions that prevent it giving you the complete protection you need and want. Or, if you have a policy as good as the JOVIAN (and there are many such issued by reputable companies) then, just as positively, you are paying approximately twice what it is necessary for you to pay.

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ıred, or —
(ou Paying Double?

Mighty Few Policy Holders Do KNOW!

Act! No attempt on our part to "hedge" in that statement is there? No dodging the issue is there? We seem mightily confident, don't we? "Why?" Just because during the past sixty days we have been up against nearly every policy under the sun submitted by "show me" Jovians, and the JOVIAN Policy has come out on top every time. The faster they come and the greater the variety, the more notches we carve in the handle of the JOVIAN artillery. See if you can stump us. What have you bought in Accident and Health Insurance? Make us prove all these big assertions as applied to your pet Policy. Do it right away!

REMEMBER!

We are not trying to SELL you something. We are offering to accomplish a valuable service for you — you pay for it in your dues, why not accept what you pay for.

Every cent of the saving made through this new Jovian plan is given to the members. Not one penny is paid to or retained by The Jovian Order, its central office, its local chapters, or any of its officers for the costly and effective service they are rendering to produce and operate this proposition. It is The Jovian Order's fulfillment of its promise to deliver a greater, tangible, direct-to-the-member benefit in consideration of the increased dues.

A SPECIAL OFFER: FILL OUT AND RETURN THE ENCLOSED APPLICATION NOW AND YOU WILL RECEIVE ONE MONTH'S FREE INSURANCE (ACCIDENT, HEALTH, OR BOTH).

IF YOU SO DESIRE, DATE YOUR APPLICATION TO TAKE EFFECT WHEN SOME OF YOUR PRESENT INSURANCE EXPIRES — PAY NOT UNTIL YOU RECEIVE THE POLICY.

THE JOVIAN ORDER

SYNDICATE TRUST BUILDING ST. LOUIS

EVERY DOLLAR YOU INVEST IN JOVIAN INSURANCE, RELEASES NEARLY ANOTHER DOLLAR FOR YOUR OTHER PRESSING NEEDS.

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NOTICE TO ALL JOVIANS

AMENDMENTS TO JOVIAN CONSTITUTION TO BE OFFERED AT JOVIAN CONVENTION, NEW YORK, OCTOBER 22-23

(In accordance with the Jovian Constitution, Mercury is hereby printing and mailing to each member in good standing not less than thirty days prior to the next annual meeting, all suggested amendments to the Jovian Constitution which, in proper form, have reached the Central Office not less than forty-five days prior to the next annual Convention.

No amendment not so presented to Mercury and so published and distributed by him shall be eligible for presentation to the next annual Central Convention, unless it shall have the unanimous consent of all members in good standing there present.)

(1) Function of The Jovian Order

An amendment which shall provide that the function of The Jovian Order in its relation to local Leagues shall be more definitely defined than at present. This definite specification shall closely check with the following:

"That the organization shall retain its present status of an international, semi-fraternal, goodfellowship, constructive, development body, and shall be made up of a large membership representative of the personnel engaged in all branches of the electrical industry, and shall perform the definite function of guiding and co-ordinating the activities of local Leagues; it shall perform its major development work, its general activities, through those established Leagues."

(2) Jovian Oath

An amendment providing that Section 2, Article XVI, of the Constitution shall not be operative with respect to the Jovian oath until said oath, as at present embodied in the ritual, shall have been re-written by a committee appointed by the next Jupiter, and approved by Jupiter and Congress.

(3) Chartered League Territory

An amendment providing that a member shall have the right to choose the League with which he shall be affiliated, regardless of whether or not such League shall have been assigned the district in which he resides.

(4) Nomination and Election of Officers Congress

An amendment providing that Congressmen and Statesmen shall be elected by the members of their respective districts and states, in place of election by the membership at large, as at present, the procedure to be as follows:

First: Any chartered Jovian League may nominate by a majority vote, certified to by not less than two of its regular officers and cast at a special or regular meeting called for the purpose, one Congressman and one Statesman for office in the district and state in which it is chartered.

Second: Jovians to the number of not less than twenty-five, residing in any city or town not having a chartered Jovian League may nominate one Congressman and one Statesman for office in the district and state in which they reside, by signing a petition setting forth their selection or selections.

Third: All certificates and petitions of nomination, accompanied by signed statements of the nominees that if elected they will accept office and fulfill the duties thereof, must be in the hands of Mercury not later than June 10, or, if mailed, bearing a post-mark not later than that date.

Fourth: All nominations so received shall be published in the issues of the Jovian magazine mailed during June, July and August.

Fifth: Mercury shall not later than August 1, supply each member in good standing with a ballot bearing the names of all candidates.

Sixth: Each member in good standing desiring to vote shall indicate his choice for one Congressman and one Statesman, in his district and state only, upon the ballot in the manner set forth thereon, and shall return the ballot to Mercury not later than September 1, or, if mailed, bearing a post-mark not later than that date.

Seventh: Notice of the result of the election shall be published in the issue of the Jovian magazine mailed during September.

Eighth: Congressmen and Statesmen shall be, with appropriate ceremony, introduced in their respective capacities, to the delegates to the Annual Convention first following their election.

(5) Jupiter and Mercury

An amendment providing that the present method of nominating and electing Jupiter and Mercury shall be changed. The following procedure is suggested:

First: Jupiter and Mercury shall be nominated by a Nominating Committee composed of Reigning Jupiter as chairman, the three Jupiters who next preceded Reigning Jupiter and three Reigning Congressmen selected by Reigning Jupiter.

Second: Nominations for Jupiter and Mercury shall be in the hands of Mercury not later than August 1, and shall be published in all issues of the Jovian magazine mailed between the time of receipt by Mercury and the time of the next annual Convention.

Third: Jupiter and Mercury shall be elected at the Annual Convention.

Fourth: The present method of electing officers and of amending the Constitution and for other Convention purposes shall obtain except that no one delegate shall have the power to cast more than fifty votes.

Fifth: Jupiter and Mercury shall be introduced to the delegates of the annual Convention in the same manner provided for Congressmen and Statesmen.

(6) Officers' Terms of Office

An amendment providing that all officers, regardless of their time or election or appointment shall hold office until January 1, in order that the newly elected Jupiter, Mercury, Congress, Statesmen, etc., may have sufficient time between the date of their election and the date of their installation in office, to plan their organization and activity.

(7) Meetings of Congress

An amendment providing that Congress shall be required to meet for the purpose of promoting the affairs of the Order at each Annual and special Convention of the Order, regardless of other meetings which it may hold.

(8) Authority of Congress

An amendment providing that Congress, in addition to their duties as district officers, shall constitute for Jupiter and Mercury an advisory board on matters relating to the entire membership and territory of the Order.

(9) Past Jupiters' Association

An amendment providing that the veto power at present delegated to the Past Jupiters' Association shall be rescinded.

(10) Distribution of Dues

An amendment providing that the present distribution of Jovian dues collected by chartered Leagues be changed so that the portion sent to the Jovian Central Office (at present $3.50

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out of $4.00) shall be $2.00, the Leagues therefore retaining $2.00. The provision in the existing Constitution shall obtain in that ruling which permits Local Leagues, within their discretion, to establish the total amount of dues and initiation fee paid their local organizations.

(11) Initiation Fee to The Jovian Order

An amendment providing that, in order to allow non-Jovian Leagues, as at present organized, to rapidly bring into the Order their entire membership, the initiation fee to the Jovian Order be waived from October 16, 1917, to February 1, 1918; that on and after the last named date, the initiation fee shall be $5.00, one-half to be retained by the local Jovian organization holding the initiation and the balance remitted to the Central Office.

(12)Central Office Expense

An amendment providing that the practice of furnishing buttons to new members without cost to such members shall be discontinued.

An amendment providing that the cash prizes given for Degree Team competition at the annual meeting shall be discontinued.

An amendment providing that the amount paid into the Past Jupiters' Endowment Fund each year shall be determined until October 16, 1920, on a basis of one-tenth of one per cent, in place of the present basis of two and a half per cent of the gross receipts of the Order; that on the date mentioned it shall be returned to the present basis.

An amendment providing that the practice of furnishing free costumes and paraphernalia be discontinued, and the outfits at present owned by the Order be sold to the highest Jovian bidder.

(13) Mercury's Compensation

An amendment providing that the present method of establishing Mercury's compensation shall be changed so that Mercury's compensation shall be fixed each year by the Nominating Committe, as previously defined.

* *

(The above suggested amendments as presented, represent the unanimous decision of a committee appointed by Jupiter Henry L. Doherty, for the purpose of considering the problems that are obstructing the best progress of The Jovian Order, and to devise ways and means of solving them.

The committee was composed of Mercury Ell C. Bennett, Po. 3932-13, St. Louis, chairman; Congressman William Gloeckner, Po. 2370, Philadelphia; Congressman Martin J. Wolf, Po. 6027, St. Louis; First Tribune Thos. J. Creaghead, Po. 3013, Cincinnati; First Tribune J. M. Bateman, Po. 2610, Cleveland.

These Jovians represented a diversity of opinion as to the needs of the Order, that was wide enough to practically cover all such opinions existing throughout the entire membership; they also represented four important Jovian centers.

The subject as discussed embodied every suggestion and criticism of any importance which from many sources had reached the Central Office and the members of the committee. They were brought up for discussion and decision without prejudice and covered by the committee in an impersonal manner with but one object in view, i. e., the future welfare of Jovianism.)

* * * *

BEATTIE REDUCES THE COST OF HIGH LIVING

AT THE last moment, just as we are going to press, a solution of the "cost of high living," for which we have been searching for many months, is flashed to us by our Cincinnati correspondent.

Although the reward for the solution goes to the correspondent, the honor and glory of the achievement is that of another. A. C. Beattie, Po. 1823, is the man who has achieved the wonderful feat. Aided and abetted by his good friend, Capt. "Bill" Hubbell, Po. 3022, they have wrested the spoils from that greedy monarch, C. of H. L.

These men are family men. It may be mentioned that each aspires to his place in the sun as a model husband. Domestic economics have been vividly impressed upon the minds of both.

From their sense of duty and training evolved an inspiration.

In some mysterious manner they learned that vegetables were very cheap out in the country.

So cranking their self-starter, they drove forth with the full intention of besting the fiery dragon, C. of H. L.

Drove forth far into the rural environments.

Passing beyond the oiled roads they entered domains where stifling dust was hurled in thick clouds from their machine; where unrestrained chickens, pigs and guinea fowl frequently barred their course; where at any moment the belligerent moo-cow might pounce unheralded upon them.

Undaunted they braved it all and disappeared in the distance.

The hours wore slowly by. Those who saw them depart awaited anxiously.

Finally as the twilight shadows were deepening they returned,—silently, with the grim, set faces of conquerors.

As conquerors they were non-commital. No word of their great victory fell boastfully from their lips.

Nor would we now be able to reveal their wonderful achievement to the Jovian fraternity, had not Jovian Beattie accidentally dropped his official report.

Our alert reporter pounced upon it.

Rushing to the nearest telegraph office he despatched it.

Here it is:

Beattie — His Vegetable Venture

Vegetables purchased:		
6 doz. ears of corn		$0.48
1 bush. tomatoes		1.00
6 heads cabbage		.20
1 lot peppers (bright red and hot)		No charge
Total cost of produce		$1.68
Incidental expense of adventure:		
*One day's work (three men)	$20.00	
Gasoline	2.00	
**Beer (for sprinkling dust)	1.00	
One puncture (in tire)	2.00	
Wine (for testing vegetables)	4.00	
One casing for car	26.50	
Cost of procuring		$55.50

*One man was a spy.

**Dust in that vicinity never yields to water.

Experts are now figuring profits of the venture. One of them was so rude as to insinuate these vegetables could have been purchased from huckster for $1.98.

Wired Beattie to that effect. Received this reply:

"Tell that fellow he don't know hucksters."

LIST OF STENTORS

CHIEF STENTORS

FOURTH DISTRICT
ROBERT L. CUNNINGHAM, Po. 4749,
Care J. F. Buchanan & Company, Philadelphia

FIFTH DISTRICT
E. F. MEYERS, Po. 6170,
345 Federal Park Place, Fort Wayne, Indiana

THIRTEENTH DISTRICT
RICHARD F. BEHAN, Po. 9315,
Care Westinghouse Electric & Manufacturing Co., San Francisco, Cal.

SIXTH DISTRICT
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The Return Circuit

Edited by W. R. Joyes, Po. 13813

When Youth Has Gone

By W. R. J.

YOUTH slips so quietly away,
We seldom note the hour or day,
Until we find the ashes cold,
Where once its waving flames were bold.
The glare above its fires subside,
As steals away the ebbing tide,
And leaves our hopes devoid of dress,
That dreamland's visions must possess.

Ah, what a change when youth has gone!
How plain the scenes we gaze upon!
The gilded caravans of dreams
Now pass another way, it seems;
Adventure's mystic paths that wind,
No longer lure the heart and mind
To follow up untrodden heights
In search of magic kingdom sites.

The rose we pluck is not as red,
Youth took its brightness when it fled;
The song-birds do not sing as gay,
Youth stole their gladsome notes away.
The sunshine is less bright by far,
Nor twinkles half so gay the star;
The grass is ne'er again as green,
The lake has lost its luring sheen.

Youth leaves no gem of its estate,
To sparkle, glow and radiate.
We rake the ashes of the past,
In hope some hidden embers last,
That we may feel their warmth again,
Or find one spark, but—'tis in vain!
On memory alone is cast,
The glare of fires of the past.

* * * *

Good-Fellowship

By W. R. J.

A MAN who brings himself to believe that he can live apart from his neighbor, socially or commercially, and get the most enjoyment out of life has gone astray in his logic. He is usually the man who believes money will buy everything he needs, whether he has it or not. Success to him becomes a god, rather than a goal of beneficial achievement. He seeks wealth that it may give him the power to dictate and dominate—that it may make him independent of the necessity to co-operate with his fellow-man. He has raised a standard of vanity and made of it a criterion of happiness.

But it won't work.

If he succeeds his vanity will flatter his conception of his own worth until he becomes arrogant; his arrogance will arouse hatred and not respect in those he tries to dominate.

If there is such a thing as real happiness in this life it must come from contentment and satisfaction. The man who places himself in a defiant attitude towards his fellow mortal can hope for neither. The cheer of good-fellowship that is generated through association made possible by kindred aims and ambitions is not for him. Fellowship is an attribute of equality. Its felicitations must be felt to be conveyed. The love that enters into it is neighborly love—appreciation, sympathy, admiration, respect. It can not be bought, it must be inspired.

And so the road that leads to power for the sake of vanity, leads in the direction of a fortification behind which a man can say to his fellow, "unless you proclaim my greatness I will injure you," or, else, "here is your price, give me love and honor." But the road that leads to power for the sake of beneficial achievement is along the open highway where honor and distinction are given without price to those who merit it and where the love of brotherhood is acquired by exchange.

After all doesn't that little feature of "good-fellowship" assume wonderful proportions as we look back along the way we came? Summed up as a whole doesn't it rank in importance with the goal we have sought—perhaps it ranks even higher?

One thing is certain good-fellowship contributes by far the greatest percentage of the earth's happiness. It has pulled many a lonely fellow out of the blues, made men get up and try again after they had given up hope, changed harsh thoughts into sympathetic ones, subdued anger, let the sunlight into a dark corner where a grouch was hiding, kicked the ennui out of numerous systems, saved men from their own destructive desires and passions and inspired confidence at the time when a punch was needed.

Sufficient it is to know that man working in harmony with his fellow mortal sows happiness, and being in the midst of the fields of happiness he reaps his share.

* * * *

The Bravest Man

By W. R. J.

THE bravest man I ever knew,
No sword or pistol ever drew;
Nor did the laurel wreath of fame
Rest on his brow, or earth proclaim
Him great—'twas the reverse,
Earth seldom served a mortal worse.
In fact he never gained renown;
The fates conspired to keep him down,
And though he worked with all his might,
And strove to rise, they held him tight
Right at the bottom all the time
Or threw down when he would climb.

He passed through life in just that way,
With no encouragement—but say,
He never sulked nor even whined,
But kept at his eternal grind.
How many times he failed would be,
A tale too long for history.
And failures are a test of grit,
That make the greatest number "quit."
But this man never "quit" one time;
He'd fall and start again to climb.
Death found him still unbeaten there
Beside the bottom of life's stair.

* * * *

Slogans

By W. R. J.

A SLOGAN isn't worth a little bit
If you don't have a punch to follow it.
Your motto may be "Win" and that sounds good,
But do you back it up the way you should?
A whistle on an engine sounds afar,
But steam behind the piston drives the car.
Full many a driver toots his screeching horn,
Who stands beside the highway all forlorn;
While there are other drivers who conserve
Their steam to help them make the grade and curve.
So when you make a slogan make it fit,
The driving force that you can put in it.
It's nice to blow your horn but, Gee, it's tough,
To blow and find you haven't steam enough!

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PRACTICAL LESSONS IN ELECTRICITY

LESSON TWENTY-NINE

PERMITTANCE OR ELECTRO STATIC CAPACITY IN ALTERNATING CURRENT CIRCUITS

By TERRELL CROFT

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THE ACTION of inductance and permittance (capacitance) when the voltage of or the current in a circuit changes is this: The reaction of a permittor instead of tending—as does inductive counter e.m.f.—to prevent any *change* in current, tends to prevent any change in voltage. That is, it tends to keep the voltage constant. If an e.m.f. is impressed across a "dead" circuit having inductance (Fig. 1) the inductance tends to prevent (Fig. 2) a current from "building up" in the circuit. Now, with the current flowing, if the e.m.f. is discontinued and the circuit short circuited (Fig. 1), the inductance will tend to prevent (Fig. 3) the "decay" of the current.

But, if an e.m.f. be impressed across a "dead" circuit containing permittance, the permittance does not oppose the "building up" but instead "permits" the displacement current to flow until the counter e.m.f. of the permittor, due to its stressed dielectric, is equal to the impressed e.m.f. Then, with the dielectric "charged," if the e.m.f. is discontinued and the circuit short circuited, the permittance instead of retarding the "decay" of the current will accelerate it by virtue of the counter e.m.f. which it imposes. Obviously, then, inductance tends to prevent a current from "building up" in a dead circuit while permittance tends to *permit* it to "build up." Furthermore, inductance tends to prevent the "decay" of current in a live circuit when the e.m.f. is discontinued while permittance tends to *promote* such decay.

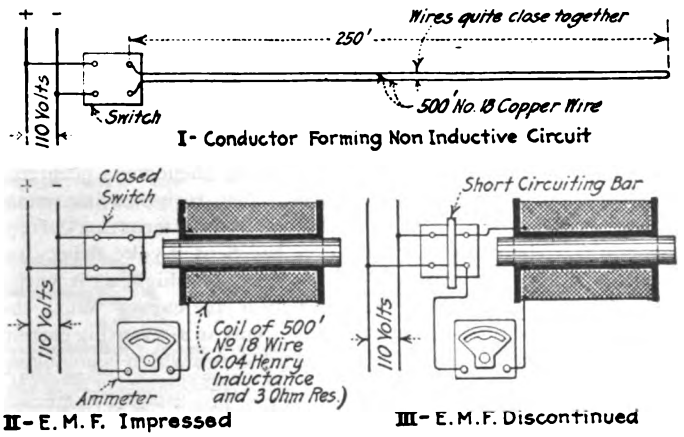

Fig. 1—Diagrams of Apparatus for Illustrating Effect of Inductance in a Circuit

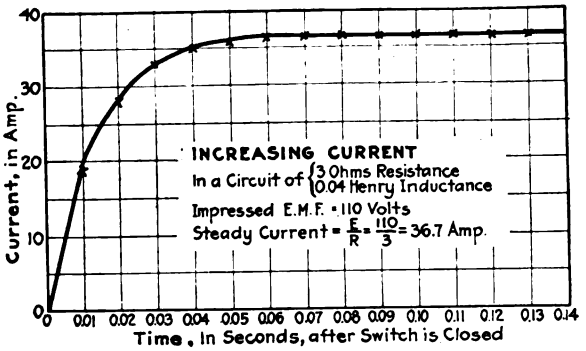
Current, in Amp.
INCREASING CURRENT
In a Circuit of 3 Ohms Resistance
0.04 Henry Inductance
Impressed E.M.F. = 110 Volts
Steady Current = E/R = 110/3 = 36.7 Amp.
Time, In Seconds, after Switch is Closed

Fig. 2—Graph Showing How Current in an Inductive Circuit Increases Gradually Though Rapidly When an e. m. f. is Applied to the Circuit

NOTE.—THE TERMS "CAPACITY," "CAPACITANCE" AND "PERMITTANCE" ARE SYNONYMOUS when used as relating to electrostatics. However, the term "capacity" may have *two* distinct meanings in electrical parlance. Hence, to eliminate misunderstandings, "capacity" should be used only in referring to "power capacity," "current-carrying capacity" or in similar senses. In referring to "electrostatic capacity" either "permittance" or "capacitance" should be used. "Capacitance" is the word recommended in the *A. I. E. E. Standardization Rules* but "permittance" (which was suggested by O. Heaviside) is preferred by the author because it is the more expressive of the actual property of the dielectric.

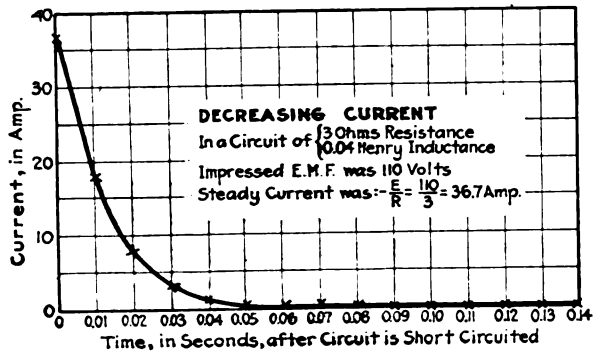
Current, in Amp.
DECREASING CURRENT
In a Circuit of 3 Ohms Resistance
0.04 Henry Inductance
Impressed E.M.F. was 110 Volts
Steady Current was:- E/R = 110/3 = 36.7 Amp.
Time, in Seconds, after Circuit is Short Circuited

Fig. 3—Graph Showing How Current in an Inductive Circuit Decreases Gradually Though Rapidly When e. m. f. is Discontinued

Inductance or permittance (capacitance) effects are produced, respectively, by changes of current or of voltage. The effects due to inductance occur in a circuit only when the current in the circuit changes. The effects due to permittance (or capacitance) in a circuit, occur only when the voltage of the circuit changes.

EXAMPLE.—If it were possible to change the current in a given circuit without altering the voltage conditions therein, then, in that case, only inductance effects would be observed—

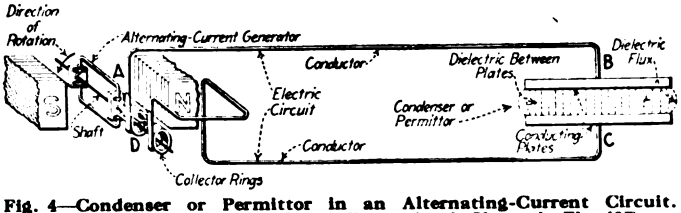

Fig. 4—Condenser or Permittor in an Alternating-Current Circuit. (The Hydraulic Analogy of this Illustration is Shown in Fig. 407)

no capacity effects. If it were possible to change the voltage impressed on a circuit without changing the current intensity (amperes) in any part of the circuit, then only permittance effects would be observed. In actual circuits, it is practically impossible to change the impressed voltage without changing the current—and vice versa. However, in practice, except where high voltages are involved or where the circuit is provided artificially with an unusual amount of permittance (with a permittor or condenser), the effects of permittance are of little consequence. The effects of inductance, since they are determined solely by the inductance of and the current in the circuit, may be and are frequently, very noticeable in low-voltage circuits—particularly in alternating-current circuits.

The effect of permittance (capacitance) in alternating-current circuits will now be considered. Just as the effects of induc

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are much more noticeable in alternating-current circuits than in direct-current circuits, so are the effects of permittance much more pronounced in alternating than in direct-current circuits.

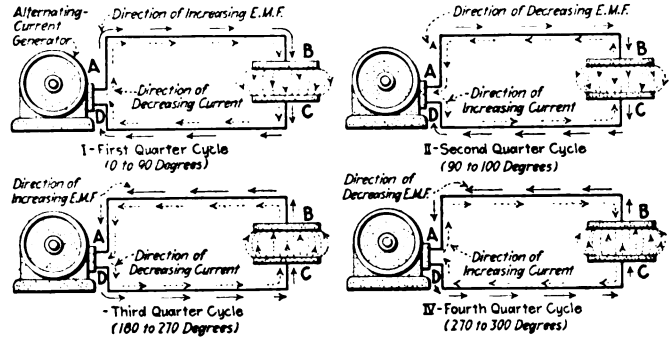

Fig. 5—Showing How a Permittor (Condenser) "Charges" as the Impressed Voltage Increases and How it "Discharges" When the Voltage Decreases

Whenever there is a *change* in the voltage impressed across a permittor (condenser), electricity is displaced in the dielectric of the permittor and a displacement current flows.

In an alternating-current circuit the e.m.f. reverses in direction periodically and is *constantly changing* in value. From this it would be inferred that a displacement (changing) current must flow constantly in an alternating-current circuit containing permittance—and such is the case. Now, note what occurs when an alternating e.m.f. is impressed across a permittor.

EXAMPLE.—Figs. 4 and 5 show an alternating-current generator connected across a permittor (condenser). If the alternator is rotated at a uniform speed, in the direction shown, a sine-wave form e.m.f. will be induced. During the first 90 degrees (in

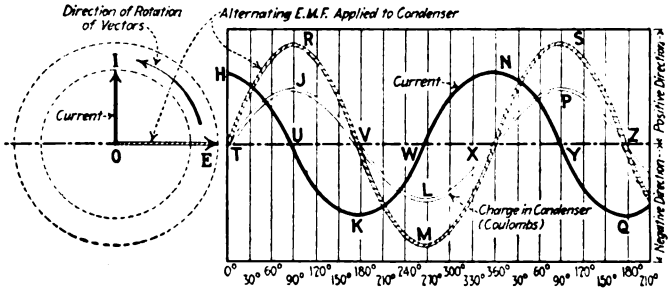
Direction of Rotation of Vectors
Alternating E.M.F. Applied to Condenser
Current
Charge in Condenser (Coulombs)
Positive Direction
Negative Direction
0° 30° 60° 90° 120° 150° 180° 210° 240° 270° 300° 330° 360° 30° 60° 90° 120° 150° 180° 210°

Fig. 6—Relations in Alternating-Current Circuit Containing Capacity Only—The Current Leads the Applied e. m. f. by 90 Degrees

Fig. 5) the e.m.f. will be in the direction *ABCD*. The portion *TR* of the e.m.f. sine curve of Fig. 6 shows how this induced voltage increases during the first 90 degrees. During this period the permittor would be "charged" in the direction *BC* (Fig. 5) as indicated by *TJ* in the graph, Fig. 6. Also, during this period the dielectric would be stressed in the direction *BC* (Figs. 4 and 5) and a displacement current would flow around the circuit in the direction *ABCD*.

During the next quarter cycle (Fig. 5, *II*), the voltage *RV* (Fig. 6) is in the same direction as before but it decreases to zero. During this 90-degree period the "elasticity" of the dielectric asserts itself and the permittor "discharges" as the e.m.f. decreases—and a displacement current is thereby forced around the circuit in the direction *DCBA*.

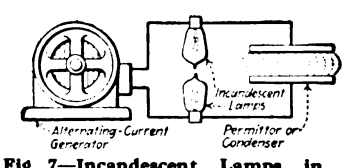

Fig. 7—Incandescent Lamps in a Circuit Containing Permittance

During the next quarter cycle the e.m.f. increases from zero to a maximum (*VM*) but it is now in the opposite direction (*DCBA*), as shown in Fig. 5, *III*, from that obtaining in the preceding half cycle *TRV*. Now, it again "charges" the permittor but in the opposite direction. The displacement current continues to flow in the direction *DCBA*.

During the next quarter cycle (Fig. 5, *IV*) the e.m.f. decreases from *M* to *X* and the permittor "discharges" in the direction *ABCD*. Thus, an alternating displacement or charging current (of the frequency of the applied e.m.f.) flows so long as the alternating e.m.f. is impressed across the permittor—in spite of the fact that the circuit is "open" in the usual sense of the word. If incandescent lamps were connected, as shown in Fig. 7, in the circuit, they would be lighted by the alternating displacement current—provided the permittor had sufficient permittance (capacitance) to allow a current to flow of sufficient intensity to heat the filaments.

Permittance (electro-static capacity) effects are of little consequence in low-voltage circuits. This follows from the fact that permittance effects occur only when there is a change in voltage. The greater the changes in voltage, the greater will be the permittance effects. Obviously, in low-voltage circuits the *changes* in voltage must be relatively small. The magnitude of the permittance effects—if the dielectric is not "stretched" beyond the rupturing point—is proportional to the applied voltage. On circuits operating at voltages lower than 6,000, it is seldom that the permittance effects—that is, the changing or

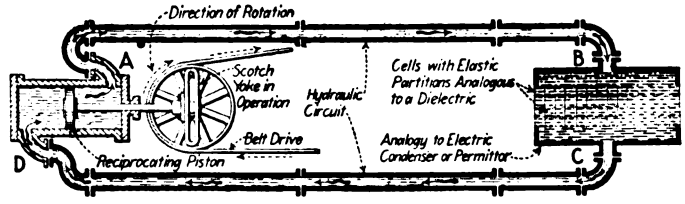

Fig. 8—Hydraulic Analogy of an Alternating-Current Circuit Containing an Alternating-Current Generator and a Condenser or Permittor. (At this instant the permittor dielectric is unstressed. The pressure or voltage is a minimum but the current is a maximum in the positive direction)

displacement current effects—are particularly noticeable; they are, though possibly inconsequential, present nevertheless.

A Hydraulic Analogue of the Action of Permittance in an Alternating-Current Circuit is outlined in Figs. 8 to 15. Fig. 4 illustrates an electric circuit analogous to the fluid circuit of Fig. 8. Fig. 6 is a graphic record of the phenomena occurring in the circuit as the pump is operated. The reciprocating pump, driven at a uniform speed, is analogous to an alternating-current generator. Its piston, by virtue of the Scotch-yoke drive, has a harmonic longitudinal motion, the speed of which, as it varies with the time, could be represented by a sine curve. When the pump is driven, it impels in the fluid circuit an alternating current of the non-compressible, weightless fluid shown which is analogous to electricity.

The contrivance at the left of Fig. 8 (which is shown enlarged in the other illustrations) is analogous to a permittor (condenser). It consists of two chambers (condenser plates) with a cellular structure between them. The cellular structure has partitions of an imaginary semi-porous elastic material and is analogous to a dielectric. The pipes and the cellular structure are all filled with the weightless, non-compressible fluid just as all matter is permeated with electricity. The pipes are frictionless (the circuit has no electrical resistance).

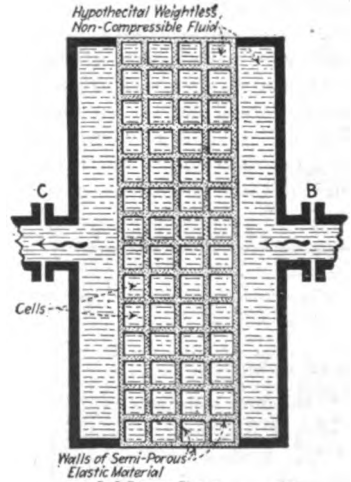

Fig. 9—Analogy to the Electric Condenser or Permittor. (This shows the dielectric unstressed, the condition obtaining when there is no difference of potential across the condenser between B and C)

As the pump is driven, its piston displaces the fluid (electricity) in the circuit—first in one direction as the piston travels to the right, then in the other as it travels to the left. The fluid which resides in the condenser when it is in its normal unstressed condition (Fig. 8) has been rendered in darker lines—merely to illustrate how the displacement of the fluid in the circuit occurs. The force exerted by the piston on the fluid is

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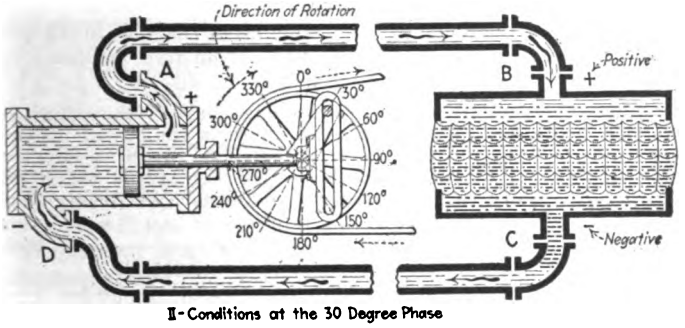
analogous to an applied e.m.f. The current (rate of flow) of fluid is analogous to an electric displacement current. The quantity of fluid (gallons) displaced is analogous to coulombs. The reactive pressure exerted by the elastic walls of the "con-



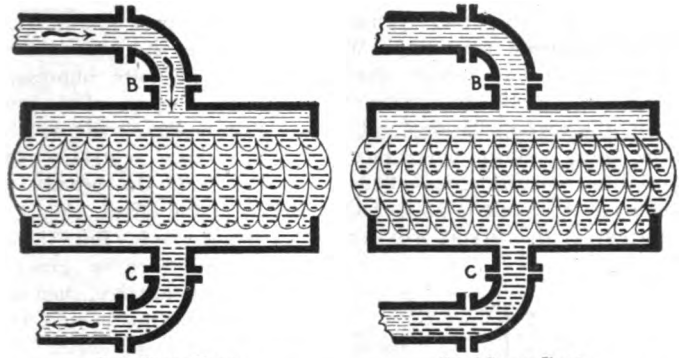
I-Conditions at the 30 Degree Phase

Fig. 10—Pressure (Voltage) Impressed by the Pump is in the Positive Direction and is Increasing and the "Dielectric" is Becoming "Stretched." The current (rate of flow) is also in the positive direction and is decreasing

denser" when they are stressed is analogous to the counter e.m.f. due to permittance—which will be further discussed in a following paragraph.

EXPLANATION.—Assume that the pump starts from the position of Fig. 8 in which the piston is at the center of the cylinder. Under these normal conditions the "dielectric" in the permittor is unstressed as shown in the enlarged diagram of Fig. 9. As the piston is forced from this "neutral" position, it displaces fluid around the circuit and stretches the elastic-walled cells (stresses the dielectric). Follow the cycle of events, referring at the same time to the graphs of Fig. 6; Fig. 10 pictures the situation after the crank has been rotated through 30 degrees.

At the instant at which the piston is at the left end of its stroke (Fig. 11, *IV*) the force which it is exerting must be a maximum because then the "dielectric" is stretched as much as is possible with the arrangement shown. Consequently, the dielectric is exerting its maximum elastic reaction (counter e.m.f.). During the next 90 degrees (Figs. 12, *V* to 13, *VII*) the pressure



III-60 Degree Phase
(Impressed Pressure is in the Positive Direction and is Increasing; Current in Positive Direction but Decreasing)

IV-90 Degree Phase
(Impressed Pressure is in the Positive Direction and is a Maximum; Current is Zero)

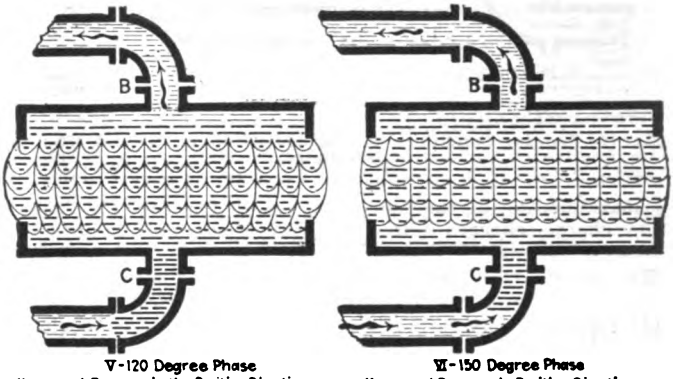
Fig. 11—Showing Conditions in "Permittor" at the 60 and 90 Degree Instants

exerted by the piston is decreasing and the permittor is discharging—the dielectric is "unstretching" back to the unstressed condition. During the next 90-degree period (Figs. 13, *VIII* to 14, *X*) the permittor is being "charged" in the opposite direction. During the following 90-degree period (Figs. 15, *XI* to 15, *XII*) it discharges—in the opposite direction from the former discharge.

Note that the phase relations in this fluid circuit are, as will be shown, the same as those in an electric circuit, containing permittance only, on which an alternating e.m.f. is impressed. At the end of each stroke, the force exerted by the piston is a maximum (Fig. 11, *IV* and 14, *X*) but at that instant the piston is reversing in direction and the fluid current—rate of flow—is zero. When the piston is at the center of each stroke, the force impressed by it is zero but the current is a maximum—it is flowing at the maximum rate because the piston is then moving at the maximum rate. Thus, the fluid current in this circuit leads the impelling force impressed by the piston by 90 degrees; Fig. 6 states the situation graphically.

A counter e.m.f. is exerted by permittance in an alternating-current circuit in a somewhat similar manner—but not in the same manner—as in inductance produces a counter e.m.f. in an alternating-current circuit. The dielectric of the permittor when it is being stressed during the charging period resists the stretching by virtue of its elastic properties. It, therefore, in effect, exerts a counter e.m.f. However, the permittance counter e.m.f. attains its maximum value, in each cycle, in the positive direction at the instant at which inductance counter e.m.f. attains its maximum value in the negative direction. Also, the converse is true. A consideration of the hydraulic analogy of Figs. 8 to 15 in connection with the graphs of Fig. 6 will verify the above statements.

The counter e.m.f. due to permittance in an alternating-current circuit is always directly opposite in phase and equal in value to the component of the impressed e.m.f. required to neutralize it as shown in Fig. 16. That this must be true will be evident from a consideration of the foregoing statements. The phase diagram of Fig. 17 indicates vectorially these relations. Hence, there is always a difference in phase of 180 deg. between the counter e.m.f.



V-120 Degree Phase
(Impressed Pressure in the Positive Direction and Decreasing; Current in Negative Direction and Increasing)

VI-150 Degree Phase
(Impressed Pressure in Positive Direction and Decreasing; Current in the Negative Direction and Increasing)

Fig. 12—Showing Conditions in "Permittor" at the 120 and 150 Degree Instants

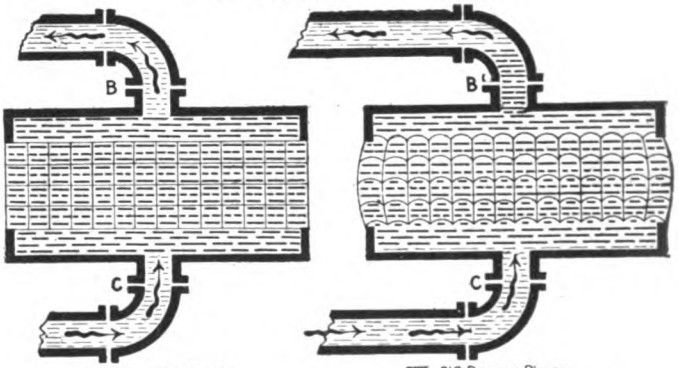
of permittance and the component of the impressed e.m.f. required to neutralize it, the counter e.m.f. leading the component of the impressed e.m.f. In a circuit containing only permittance—if such a circuit could exist—the counter e.m.f. of permittance e.m.f. would be directly opposite to—would lead by 180 deg.—and would be of the same value as the impressed e.m.f.

To compute the counter e.m.f. due to permittance in an alternating-current circuit, the e.m.f. impressed on which is of sine wave form, the value of the current in the circuit is multiplied by the quantity: $1 \div (6.28 \times f \times C)$. Hence, it follows that:

$$(1) \qquad Ec = I \times \left(\frac{1}{6.28 \times f \times C}\right) \qquad \text{(volts)}$$

or, since $2 \times \pi = 6.28$, as it is frequently written:

$$(2) \qquad Ec = \frac{I}{2 \times - \times f \times C} = \frac{I}{6.28 \times f \times C} \qquad \text{(volts)}$$



VII-180 Degree Phase
(Impressed Pressure is Zero, Current in the Negative Direction and a Maximum)

VIII-210 Degree Phase
(Impressed Pressure in the Negative Direction and Increasing Current in Negative Direction and Decreasing)

Fig. 13—Showing Conditions in "Permittor" at the 180 and 210 Degree Instants

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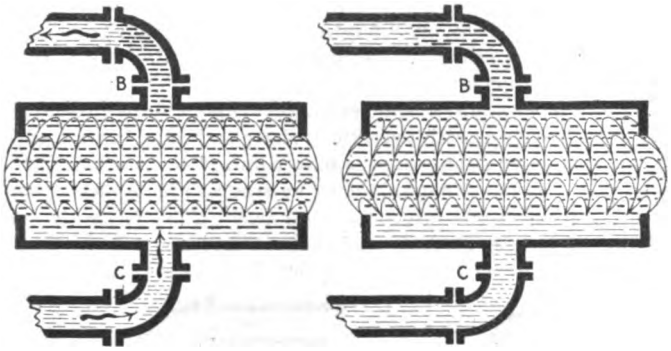
Wherein—Ec = the counter e.m.f., in volts, exerted by the permittor. I = the effective current, in amp., in the circuit. f = frequency of the current, in cycles per second. C = permittance or electrostatic capacity of the circuit in farads. The proof of the above equation follows:

PROOF.—The "charge" or displacement in a permittor on which an alternating e.m.f. is impressed changes from zero to



IX - 240 Degree Phase
(Impressed Pressure in the Negative Direction and Increasing; Current in the Negative Direction and Decreasing)

X - 270 Degree Phase
(Impressed Pressure in the Negative Direction and is a Maximum, Current is Zero)

Fig. 14—Showing Conditions in "Permittor" at the 240 and 270-Degree Instants

a maximum during the time of ¼ cycle. See Fig. 16. That is, the charge changes $Qm = C \times Em$ (coulombs) in $1 \div 4 \times f$ seconds. Now:

(3) $$Charge = Average\ Current \times Time$$

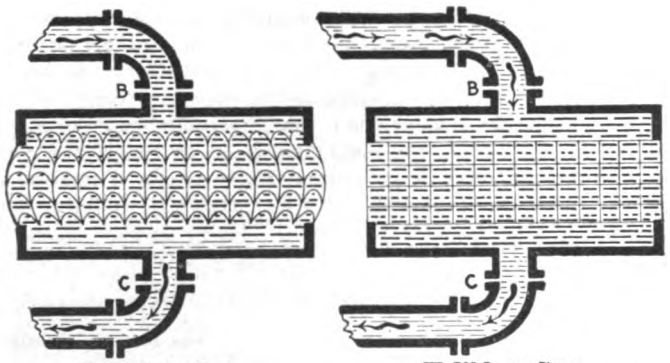
(4) that is, $$Qm = C \times Em = Iav \times \frac{1}{4 \times f} \quad \text{(coulombs)}$$

(5) or, $$C \times Em = \frac{Iav}{4 \times f}$$

Then from the above:

(6) $$Iav = 4 \times f \times C \times Em$$

That is, the average charging current equals four times the product of the frequency, permittance and maximum e.m.f.



XI - 300 Degree Phase
(Impressed Pressure in Negative Direction and Decreasing; Current in Positive Direction and Increasing)

XII - 360 Degree Phase
(Impressed Pressure is Zero; Current in the Positive Direction and a Maximum)

Fig. 15—Showing Conditions in "Permittor" at the 300 and 360-Degree Instants

(7) But $$Im = Iav \times 1.57$$

(8) Then $$Im = 4 \times f \times C \times Em \times 1.57$$

(9) Substituting $$Im = 6.28 \times f \times C \times Em \quad \text{(amp. max.)}$$

(10) Then $$I = 6.28 \times f \times C \times E \quad \text{(amp. eff.)}$$

(11) And $$E = \frac{I}{6.28 \times f \times C} \quad \text{(volts eff.)}$$

Since the counter e.m.f. exerted by a permittor must always equal the e.m.f. impressed it follows that:

(12) $$Ec = \frac{I}{6.28 \times f \times C} \quad \text{(volts)}$$

Permittance reactance is the opposition offered by permittance to the flow of alternating current. It is similar to but not the same as inductive reactance. It is measured in ohms. The equation for permittive reactance is:

(13) $$Xc = \frac{1}{6.28 \times f \times C} \quad \text{(ohms)}$$

Wherein—the symbols have the same significance as in the preceding paragraph, except that Xc = permittive reactance, in ohms.

EXAMPLE.—What is the reactance in ohms of the permittor shown in Fig. 18? What current will flow in the circuit (assuming that it has no resistance or inductance), when an effective alternating voltage of 110 is impressed across the permittor.

SOLUTION.—Substituting in the above formula for reactance:

$$Xc = \frac{1}{6.28 \times f \times C} = \frac{1}{6.28 \times 60 \times 0.000{,}003} = \frac{1}{0.011{,}346} = 88\ ohms.$$

Then the current, from the Ohm's law formula, would be:

$$I = \frac{E}{X} = \frac{110}{88} = 1.38\ amp.$$

Permittance and inductance produce precisely opposite effects in alternating-current circuits. That is, their effects are 180 degrees apart in phase. Hence, one may partially or wholly

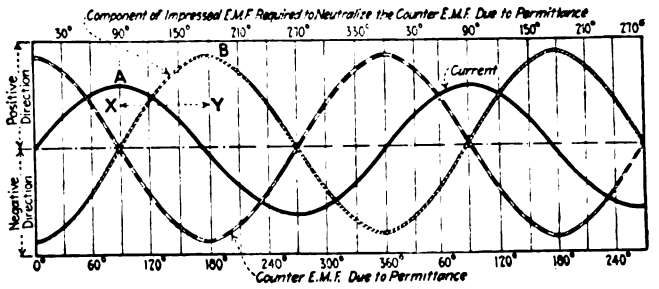

Component of Impressed E.M.F. Required to Neutralize the Counter E.M.F. Due to Permittance
30° 90° 150° 210° 270° 330° 30° 90° 150° 210° 270°
Positive Direction
Negative Direction
A
B
X
Y
Current
0° 60° 120° 180° 240° 300° 360° 60° 120° 180° 240°
Counter E.M.F. Due to Permittance

Fig. 16—Showing How the Counter e. m. f. Due to Permittance Directly Opposes the Impressed e. m. f.

"neutralize" the other. That this should be true follows from the statements preceding. When inductance and permittance do neutralize in a circuit, then if the e.m.f., in volts, impressed on the circuit be divided by the resistance, in ohms, of the curcuit, the current, in amp., which will flow in the circuit will be the result. When inductance and permittance neutralize the resulting condition is called "resonance." If the permittive effect in a circuit is greater than the inductive effect, then the current in the circuit will lead the applied e.m.f. But, if the inductive effect is greater than the permittive, then the current will lag behind the applied e.m.f.

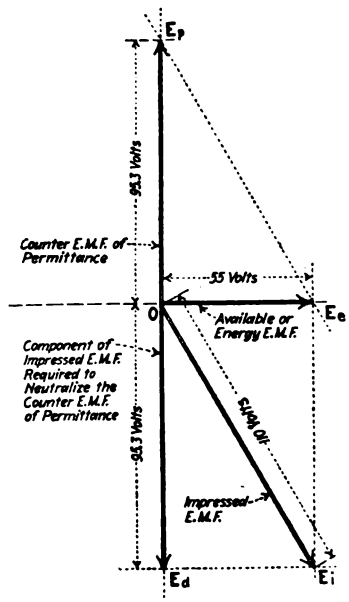


Fig. 17—Showing Relations of e. m. fs. in a Circuit Containing Resistance and Permittance

The current in a circuit containing permittance only, leads the impressed e.m.f. by 90 degrees as shown in Figs. 6 and 16. When the impressed e.m.f. is increasing in one direction the alternating displacement current is in the same direction — but it is decreasing in intensity. When the impressed e.m.f. is decreasing in one direction, the displacement current is increasing but is in the opposite direction. The displacement or charging current "through" permittance is greatest when the *rate of change* of the impressed e.m.f. is greatest — that is, at the instants at which the

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impressed e.m.f. is zero. At the instants at which the impressed e.m.f. is a maximum (when its rate of change is zero) the displacement current is zero. In any cycle the displacement current, in a circuit containing only permittance attains its maximum intensity 90 degrees before the impressed e.m.f. reaches its maximum intensity, thus the current leads the impressed voltage by 90 degrees. The alternating displacement current lags 90 degrees behind the counter e.m.f. due to permittance, as shown in Fig. 16.

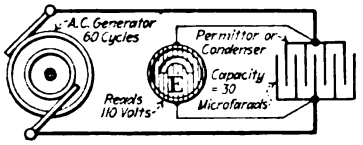

Fig. 18—Illustrating Permittive Reactance

The current in an alternating-current circuit containing only permittance (capacitance) and resistance always leads the e.m.f. impressed by the generator. The amount of lead is proportional to the amount of permittance in the circuit. If there is no permittance—only resistance—in the circuit, then there is no lead and the current will then be in phase with the impressed e.m.f. as shown in Fig. 19. In a circuit consisting wholly of permittance—such a circuit, however, is a physical impossibility—the current would lead the impressed e.m.f. by exactly 90 degrees as shown in Fig. 6. With varying proportions of permittance and resistance, the current will lead the impressed e.m.f. by some amount between 80 degrees and 0 degrees. With little permittance in the circuit there will be little lead; with much permittance in the circuit the lead may be almost 90 degrees.

Power is not lost in impelling an alternating-current in a circuit containing only permittance. The reason is this: All (see note below) of the energy expended in displacing the elec-

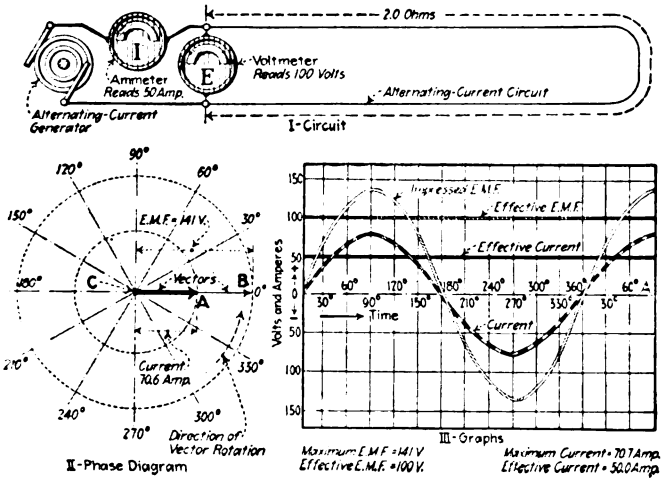

Fig. 19—Example of an Alternating-Current Circuit Containing Resistance (2 Ohms) Only

tricity in one direction and in stressing the dielectric of the permittor, as the voltage increases during the first half alternation of a cycle, is returned to the circuit during the last half alternation (when the voltage is decreasing) as the dielectric exerts its elasticity and pulls back into an unstressed condition. Pressure must be exerted by the pump to stretch the "dielectric" cells and displace "electricity" through the "permittor" from the position of Fig. 8 to that of Fig. 11, *IV*. But, as the pump pressure decreases (Figs. 12, *V* to 13, *VII*) the stressed "dielectric" returns to its normal condition forcing the "electricity" back again. However, power *is* required to overcome the frictional resistance (if there is any) that the pipe circuit offers to the current of water as it surges back and forth. Similarly, power (watts) is expended in overcoming the resistance (ohms) that any conductor in a permittor circuit offers to the current displaced in the circuit by virtue of the permittor. The power loss in any conductor in which *any* current flows is always $I^2 \times R$.

NOTE.—It is not strictly true that *all* of the energy expended in displacing the electricity in charging a permittor is returned to the circuit when the permittor discharges. There are small energy losses, which occur when an alternating current "flows through" a permittance, called "Dielectric Hysteresis Losses." These may be thought of as representing the energy wasted in a sort of an intermolecular friction which occurs when the dielectric material is "stretched" and then "returns" to its original condition. The exact nature of these losses is not clearly understood. In any event, dielectric hysteresis losses are relatively very small and consequently are of little importance in ordinary practical work.

Elastance is the name which has been given to the reciprocal of permittance. Just as permittance may be measured in farads, elastance may be measured in darafs. A permittor which has a permittance of 10 farads would have an elastance of: $1 \div 10 = 0.1$ darafs. A permittor having a permittance of 0.5 farads would have an elastance of $1 \div 0.5 = 2$ darafs. The relation between permittance and elastance is analogous to that between conductance and resistance.

Coming Conventions

Association of Iron and Electrical Engineers.

Eleventh annual convention, Philadelphia, Pa., Bellevue-Stratford Hotel, September 10 to 14. Secretary J. F. Kelly, National Tube Company, McKeesport, Pa.

Association of Railway Telegraph Superintendents.

Annual convention, Hotel Raleigh, Washington, D. C., September 10 to 13. Secretary, W. L. Connelly, Gibson, Ind.

International Association of Municipal Electricians.

Annual convention, Niagara Falls, N. Y., September 11 to 14. Secretary, Clarence R. George, Houston, Texas.

Northwest Section, National Electric Light Association.

Annual convention, Spokane, Wash., September 12 to 15. Secretary, J. F. Farquhar, Washington Water Power Company. Spokane, Wash.

American Electrochemical Society.

Annual convention, Pittsburgh. Pa., October 3 to 6. Secretary, Prof. J. W. Richards, Lehigh University, South Bethlehem, Pa.

National Electrical Contractors' Association of the United States

Annual convention, New Orleans, La., October 10 to 13. Secretary, H. C. Brown, Utica, N. Y.

Write a Jovian Song

The B. H. Stief Jewelry Co.

offers a handsome piece of Jewelry for the best Jovian Song, to be selected by

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All Jovians are eligible to participate in the contest. Submit your songs, either with or without music to

JOVIAN ORDER

1415 Syndicate Trust Building

ST. LOUIS, MO.

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EMPLOYERS
CAN YOU USE ANY OF THESE MEN?
Do You Need
AN EXECUTIVE, SALESMAN, SUPERINTENDENT, ENGINEER OR OTHER EMPLOYE?

WE PUBLISH below a list of more than 300 applications now on file with our Employment Bureau, giving the number under each classification and a limited statement of the specifications. Among these you will surely find the man to fill the place you have open. Let us know your requirements, and we will take pleasure in putting the applicants in touch with you promptly. Address The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

CLASSIFICATION	No. on File	Age	Qualifications	Experience	Salary Wanted	Location
Bookkeepers	2	26–31	High School	5–14 yrs.	$65–100	Anywhere.
Central Station Engineers	5	29–45	H. S.-Univ.	6–18 yrs.	$60–200	Anywhere.
Clerical	7	22–47	High School	2–10 yrs.	$65–125	Anywhere.
Commercial Laboratory Workers	1	29	Tech. School	11 yrs.	.....	Anywhere.
Construction Engineers	8	21–39	H. S.-Univ.	4–20 yrs.	$50–200	Anywhere.
Consulting Engineers	2	27	Tech. Grad	8 yrs.	.....	Anywhere.
Draftsmen	2	25–31	Tech. School	5–18 yrs.	$80–150	Anywhere.
Electricians	6	20–35	H. S.-Univ.	3–12 yrs.	$60–100	Anywhere.
Electrical Engineers	18	22–45	Practical-Univ.	5–20 yrs.	$65–300	Anywhere.
Engineers	8	23–31	Practical-Univ.	5–12 yrs.	$120–160	Anywhere.
Estimators	2	26–34	Practical	9–18 yrs.	$90–125	Anywhere.
Fixture Men	2	26–28	Practical	10 yrs.	$140	Anywhere.
Foremen	4	27–31	Practical	7–14 yrs.	$125–160	Anywhere.
General Managers	4	30–34	Practical	7–15 yrs.	$250–417	Anywhere.
Illuminating Engineers	2	26–31	Univ	5–7 yrs.	$100–200	Anywhere.
Linemen	2	24–28	High School	4–9 yrs.	$90	Anywhere.
Maintenance Men	1	26	High School	6 yrs.	.....	Anywhere.
Managers, Commercial Department	1	37	Practical	12 yrs.	$200	Anywhere.
Managers, Contracting	1	26	College	5 yrs.	$125	Anywhere.
Managers, Jobbing House	1	32	College	13 yrs.	$10,000	Anywhere.
Managers, Office	1	32	High School	10 yrs.	$200	Anywhere.
Managers, Plant	19	25–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere.
Managers, Store	1	29	Univ.	10 yrs.	$125	West.
Managers, Railway	1	39	Practical	4 yrs.	$300	Anywhere.
Managers, Traffic	1	37	Practical	15 yrs.	$250	Anywhere.
Manufacturers Representatives	14	30–46	Practical-Tech.	9–20 yrs.	Com.–$300	Anywhere.
Mechanical Engineers	1	40	Univ.	.....	$200	St. Louis.
Meter Testers	2	28–34	Grade-College	8–16 yrs.	$100	Anywhere.
New Business Managers	4	29–34	H. S.-Univ.	9–15 yrs.	$100–200	Anywhere.
Office Executives	8	25–40	Grade-Univ.	4–18 yrs.	$80–200	Anywhere.
Purchasing Agent	10	24–41	Grade-Tech.	4–21 yrs.	$80–200	Anywhere.
Sales Engineers	11	25–41	College-Univ.	4–11 yrs.	$100–200	Anywhere.
Sales Managers	12	28–45	H. S.-Univ.	4–17 yrs.	$150–417	Anywhere.
Salesmen	74	22–55	H. S.-Univ.	2–25 yrs.	$75–200	Anywhere.
Store Keepers	1	33	Practical	10 yrs.	$150	Anywhere.
Superintendents	25	26–46	H. S.-Univ.	3–15 yrs.	$100–500	Anywhere.
Supervisors Lighting	1	25	Technical	7 yrs.	$100	East.
Telephone Engineers	2	24–28	H. S.-Tech.	5–7 yrs.	.....	Anywhere.
Testing Engineers	1	24	Technical	2 yrs.	$100	Anywhere.
Wiremen	2	23–30	High School	7–17 yrs.	$75–125	Anywhere.

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JOVIANS!

Can You Use Any of These Jobs?

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, are seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau. A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of any of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

66. Department Manager. Opportunity for capable man as head of electrical department in a West Virginia hardware house; must be familiar with buying and source of supplies.

67. Store Salesmen. Illinois house will pay salary and commission to right man.

68. Retail Salesman. San Francisco house invites correspondence with man desiring to locate there; expense of trip taken into consideration.

69. Electricians. Eastern contracting concern wants five men who can take charge of construction gang, putting up switchboards and wiring as laid out on blue prints; 50 cents per hour for 56 hour week, with overtime at time and one-half.

70. Electrical Tool Designer. Man with practical experience wanted by Cincinnati house.

71. Small Property Man. Combination wireman, meterman and troubleman needed by a small-town Missouri public utility.

72. Lineman. Opportunity in small Missouri town.

73. Salesman. Man wanted to sell vacuum cleaners and appliances on commission.

74. Bookkeeper. Chicago house wants young man.

75. Salesman. Man who can sell the goods needed by New York electrical supply house.

76. Clerk. Young man familiar with purchases and invoices, required by New York electrical distributing house.

77. Cost Clerk. Man familiar with electrical supply jobbing business wanted in Toledo.

78. Salesman. Man wanted to handle inquiries and make quotations over the telephone; New York house.

80. Supply Salesman. Opportunity for young man with practical experience to work into position of responsibility with growing firm; reasonable salary to start.

81. Salesmen. Philadelphia house wants sales and electrical engineers to handle a line of machinery and supplies.

82. Salesmen. Specialty commission men wanted by Chicago distributors of standard specialties.

83. Purchasing Agent. Buyer wanted by large electrical supply house.

84. Estimators. Men capable of handling the wiring of office buildings, wanted in Cleveland.

85. Motor Salesman. Chicago and Kansas City territory open for men with experience selling a. c. and d. c. apparatus.

86. Electrical-Mechanical Engineer. Middle West opening for man familiar with a. c. and d. c. design, to work under chief engineer and direct work in drafting room.

87. Sales Positions. Eastern manufacturer willing to train and pay good salary to promising beginners (under draft age), with opportunities for rapid advancement; knowledge of foreign languages an asset.

88. Lineman. Tennessee public utility wants competent an; $2.75 per day.

89. Bookkeeper. One who can also act as chief clerk, by middle-west publicity utility company; $100 per month.

90. Winders. Ohio manufacturing concern wants men for armature, motor and field-coil work.

91. Power Apparatus Salesman. High grade man needed for larger cities of Middle West; salary commensurate with results.

92. Lamp Salesmen. Positions for men of initiative and energy in Pittsburgh, Columbus and Atlanta territory; $100 to $175 per month.

93. Salesmen. Two worth-while men needed by New Orleans house, to sell electrical supplies and auto accessories to city and country trade.

94. Clerk. Southern jobbing house want young man for correspondence and office detail work.

95. Order Clerk. Young man familiar with materials for interior wiring and their prices, wanted by New York contracting concern.

96. Estimator. Opening with New York contractor, for young man familiar with plans, specifications and material for interior wiring.

97. Manager Retail Department. Buffalo electric house is looking for young department head who can also handle advertising and is familiar with promotion of sales.

98. Salesman. Chicago electrical house wants man (one with technical experience preferred) living in the territory, to cover Michigan, Northern Wisconsin and Minnesota, to introduce specialty lines of well known manufacturer and jobber.

99. Illuminating Engineer. Chicago concern has attractive opening for right man.

100. Purchasing Agent. Man with ability can secure good place with Chicago electrical concern.

101. Lineman. $80 to $85 per month to competent men offered by Southwest Missouri public service corporation.

102. Fixture Salesman and Estimator. Man combining these two essentials wanted by Cincinnati house, to call on home builders and solicit orders for lighting fixtures.

103. Fixture Salesman. New Orleans house has place open for the right man.

104. Sales Engineer. Man familiar with Westinghouse apparatus wanted to take charge of Buffalo office of electrical supply house, in sales capacity.

105-6. Wiremen and Electricians. Illinois public service concern will pay $75 per month for men.

107. Bookkeeper. Attractive opening with Milwaukee house. $100 or more to young man with good business experience.

108. Assistant Sales Manager. New York house offers good opportunity to hustler, acquainted with supply line and office details.

109. Manager. Man, familiar with mechanical end of electric motor plant, to take charge of department for Ohio manufacturing concern; $125 per month.

110. Plant Operator. Texas light and power company will pay $90 per month for the right man.

111. Electrical Engineer. Highly trained technical man wanted by large eastern manufacturer; salary liberal as soon as ability demonstrated. More complete particulars on application.

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JOVIAN HOTELS

HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their **current membership cards** at the time of settlement. **Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage.** Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

	Minimum Without Bath	Minimum With Bath
Asheville N. C.—Langren	.....	.....
Atlantic City, N. J.—Isleworth	$1.50	$2.00
Baltimore, Md.—Emerson	$2.00	$2.50
Boise, Ida.—Idanha	$1.00	$1.50
Boston, Mass.—Brunswick	.....	.....
Charlotte, N. C.—Buford	$1.00	$1.50
Chattanooga, Tenn.—Theresa	.....	.....
Colorado Springs, Colo.—Acacia	.....	.....
Columbia, S. C.—Colonial	.....	.....
Dallas, Tex.—Oriental	$1.50	.....
Des Moines, Ia.—Kirkwood	.....	.....
Denver, Colo.—Albany	$1.00	$1.50
Detroit, Mich.—Hotel Tuller	.....	.....
Dixon, Ill.—Dixon Inn	$1.00	.....
Edmonton, Alta.—Alberta	.....	.....
Eau Claire, Wis.—Eau Claire	.....	.....
Ft. Wayne, Ind.—Wayne	$1.00	.....
Ft. Worth, Tex.—Metropolitan	.....	.....
Gary, Ind.—Gary	$1.00	$1.50
Grand Rapids, Mich.—Livingston	$1.00	.....
Harrisburg, Pa.—Columbus	.....	.....
Houston, Tex.—Bender	$1.50	$2.00
Hutchinson, Kan.—Chalmers	.....	.....
Idaho Falls, Ida.—Eleanore	$1.00	$2.00
Jackson, Miss.—Royal	.....	.....
Jacksonville, Fla.—Mason	.....	.....
Jacksonville, Ill.—Pacific	.....	.....
Kalispell, Mont.—Kalispell	$1.00	.....
Kansas City, Mo.—Coates	$1.00	$1.50
Lethbridge, Alta.—Alexandria	$1.00	.....
Los Angeles, Cal.—Clark / New Rosylyn	$1.00	$1.50
Louisville, Ky.—Galt	.....	.....
Madison, Wis.—Capital	$1.00	.....
Milwaukee, Wis.—Charlotte	$1.00	.....
Mitchell, S. D.—New Navin	.....	.....
Montgomery, Ala.—Exchange	.....	.....
Montreal, P. Q.—St. Lawrence Hall / Windsor	.....	.....
Muskegon, Mich.—Muskegon	$1.00	$1.50
New Orleans, La.—De Soto	$1.00	.....
New York, N. Y.—Breslin	.....	.....
Niagara Falls, N. Y.—Prospect	.....	.....
Norfolk, Va.—Southland	$1.00	$1.50
Oshkosh, Wis.—Tremont	.....	.....
Peoria, Ill.—Mecca	$1.00	.....
Philadelphia, Pa.—New Bingham	$1.50	$2.50
Pittsfield, Mass.—Wendell	$1.50	.....
Portland, Ore.—Multnomah	$1.50	.....
	Oregon	$1.00	$2.00
Richmond, Va.—Jefferson	$1.50	$2.50
	Richmond	$1.50	$2.50
Roanoke, Va.—Rockledge	$1.00	.....
Rochester, N. Y.—Powers	.....	$2.00
Rutland, Vt.—Berwick	.....	.....
St. Joseph, Mo.—St. Francis	.....	.....
St. Louis, Mo.—American	$1.50	.....
Salt Lake City, Utah—Newhouse	.....	.....
San Angelo, Tex.—Landon	.....	.....
San Diego, Cal.—San Diego	$1.00	.....
San Francisco, Cal.—Argonaut	$1.00	$2.00
	Sutter	$1.50	.....
Santa Barbara, Cal.—Potter	.....	.....
Schenectady, N. Y.—Mohawk	$1.00	$2.00
Seattle, Wash.—Seattle	$1.00	$2.00
Sheridan, Wyo.—Sheridan	.....	.....
Shreveport, La.—Youree	.....	.....
Sioux City, Ia.—Martin	$1.00	$2.00
Spokane, Wash.—Spokane	.....	.....
Springfield, Mo.—Colonial	.....	.....
Tacoma, Wash.—Olympus	.....	.....
Three Rivers, Mich.—Three Rivers	$2.00	.....
Tucson, Ariz.—Heidel	.....	.....
Vicksburg, Miss.—Carroll	$1.00	.....
Waco, Tex.—New State	$1.00	$2.00
Watertown, S. D.—Kampeska	$1.00	.....
Winnipeg, Man.—St. Regis	$1.50	.....
	Wellington	$1.00	$1.50
Winona, Minn.—Winona	.....	.....

Dues of Enlisted Jovians Remitted

ALL JOVIANS who enlist in the Military Service of the United States or any of the allies of our country will have their dues in the Jovian Order cancelled and will be carried on an honor roll during such enlistment. Their cards, magazines and other Jovian material will be forwarded to them at the front or elsewhere whenever possible. Jovians should advise the Central Offices of the Order, of their enlistment.

THE JOVIAN ORDER

Syndicate Trust Building : : : SAINT LOUIS

JOVIANS LOOK!

THE Jovian Constitution provides that a ballot be published here on which each Jovian may indicate his preference as to any individual for any elective office. The ballots are to be handed to the Nominating Committee for their information and guidance. Fill it out and mail to

THE JOVIAN ORDER

SYNDICATE TRUST BLDG. ST. LOUIS

THE JOVIAN ORDER
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ST. LOUIS

My preference for (state name of office)

.....

for the next administration is.....

.....Po.....

(Sign here)

.....Po.....

City..... State.....

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THE JOVIAN

Volume Eleven | OCTOBER, 1917 | Number Eleven

MOBILIZATION, EQUIPMENT AND TRAINING OF OUR ARMY A TREMENDOUS FEAT

THERE are a few people in the United States whose patriotism is so lightly grounded, who are so warped from selfishness, or so lacking in comprehension of the significance of sacrifice and support necessary to aid their government in its war that they go around looking for something to object to or protest about.

The trouble with these people is that they do not realize they are trouble-makers, that they are working against the interests of their country and consequently indirectly against their own interests. They are not broadminded and logical enough to realize that a condition of war brings inconveniences to and requires sacrifices of the people of any nation engaged in it.

No war was ever waged in which there were not irregularities of some nature. No draft of an army was ever made in which some people were not exempted illegally, either because of influence or mistakes. It is safe to say no army will ever be drafted as long as the draft is handled by human beings in which the exact letter of the law is complied with without a single exception. At least not until the human race becomes so perfect that men are above fault. Then there will be no necessity for war.

Up to the present time there is every indication that the law has been nearer complied with to the letter in the present draft than ever before. There have been fewer evasions in proportion to the number drafted, fewer mistakes, fewer irregularities, and consequently less to complain about.

Never before in the history of the world has an army of raw recruits been mobilized of anything like this number, with such provisions made for its care, with such few hardships to be endured by the soldiers and with such little inconvenience to the people of the nation. Never has an army been treated better, had better equipment provided for it or been encamped in better quarters.

The United States Government has done more to provide for the comfort, health and moral environment of its soldiers than has any other nation. It has been a stupendous task. Stupendous, not alone from the size of the army to be mobilized and trained, but also because of the small force of experienced military men available to plan and handle the work.

Taking everything into consideration, the achievement is a remarkable one. There has been no bluster, no congestion, no haphazard, makeshift preparations of any consequence that had to be revised. There has been no rushing of men to half-equipped and half-provisioned camps. What has been done has been accomplished systematically. The manner in which the work has progressed makes the present preparation a foundation upon which a still greater army may readily be developed.

It will be an army trained and equipped for war. It will be supported by efficient equipment and munition producing organizations and a system for developing the reserve strength of the nation that will place it upon a plane of equality with the military forces of the leading nations of the world.

It is an achievement of which to be proud. It is the result of the efforts of technically trained men of every department of industry, co-operating with our military leaders.

The part the electrical industry has taken and the results attained are especially gratifying. Its activities have placed the American army in the front rank in equipment with modern electrical war appliances.

Those who cannot, or will not, view the task and the achievement in its entirety are indeed of very narrow vision, or actuated by ulterior motives.

* * * *

THE ETERNAL QUESTION OF WAR

* * * "We look in vain for our own youth; our tall and supple dark-eyed boys. They were with us yesterday; they are gone today. Whither? No one knows. When will they return? Still no answer. We are proud of our boys, what they have done and what they intend to do. We would not have them back with us while our volunteer army is in the field. Everything is as it should be in a patriotic nation like ours—but!"—The Southwestern Electrician.

Back of it all is the eternal question that wells up from the human heart—that unanswerable question that hangs mutely upon the lips held back by a strong sense of duty, of patriotism, of honor and of devotion to principles. It is a greater question than one of self-sacrifice. It comes to the soldier only when he thinks of the helpless ones he leaves behind; it unfolds itself to those who watch a brother or a friend fall into the ranks and march away; to the wife who waves a fond farewell as the troops pass around the turn in the road; vaguely to the child gazing in awe at the disappearing form of a parent; and to the parents—the brave little mothers who smile into the faces of their soldier boys with great billows of tears surging in their hearts and to the silent fathers whose hands tremble at the last clasp of parting. It is the eternal question—"Why is war?"

The charity, love and sympathy of the human heart has sought the solution of the question in all ages. Religion and enlightenment have worked to prevent its recurrence. Just rulers and wise councils have sought to eliminate it, but to no avail.

It is to be hoped that the solution is at hand; that the American army striking for world-freedom will throw a weight into the scales and aid in delivering a blow that will resound throughout coming ages as the inception of universal peace; that from it will be evolved the great brotherhood of man—a bond of fellowship so strong that hatred, greed and the lust for power will be held firmly in subjugation and in contemptible disrepute.

Our boys are joining those of other nations in this war for liberty. They go forth as standard-bearers of Democracy—not alone to fight, but to maintain by example the principles for which Democracy stands.

They will find men from other nations actuated by the same purpose. Out of the fellowship that will follow a tie may be formed that will bring humanity closer together.

Our hearts go with our soldiers. We have placed our confidence in them that they will valiantly uphold our traditions both in arms and in victory; that in both they will demonstrate to the world the high moral standards of a race fostered in a government of individual freedom and equality, and that the endowment of such a government is enlightenment, charity and honor as well as bravery and strength.

Yes, we are proud of our boys, and we are proud of the message they carry to the world. May it be written into history for future generations as the final solution of the eternal question—War.

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

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Advertising rates on application.

FIFTEENTH JOVIAN CONGRESS

Henry L. Doherty, Po. 3208-33, Fifteenth Jupiter, New York, N. Y.

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PAST JUPITERS' ASSOCIATION, 1915-16.

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Past Jupiter Thirteen, Chicago, Ill.

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Past Jupiter Fourteen, Indianapolis, Ind.

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ONE OF THE RETURNS FOR YOUR $4

THERE is a great field in the Jovian Order for the further development of the Employment Bureau. This service through which a large number of men are being placed offers one of the most practical features of the Central Offices' activity.

The reason for this lies in the fact that it supplies a need in the electrical industry. That need is an international clearing house through which the right kind of a man can be secured for a position and the right kind of a position for a man.

Every employer knows the value of good help An A1 salesman can sell any meritorious line of goods. He can build up a trade and hold it. A poor salesman frequently loses the trade in an established territory.

What is true in this respect of the selling end of every business is true of every other department connected with. Beginning with the executive department and coming right down to the alert and courteous office boy or his contemporary, who neither knows, nor cares to know his duties, the contrast between efficient and poor service is apparent.

While the Jovian Free Employment Bureau does not entirely solve the question, it offers a great help towards its solution:

First, it gives the employer a larger list of selected applicants from which to choose.

Second, it will save time in securing applicants.

Are these not sufficient reasons why the service should be used by employers?

A good idea of what the service has grown to be may be had from the lists published on other pages in this issue of the magazine.

* * * *

THE PARAMOUNT QUESTION

WILL AN INTELLIGENT PEOPLE CONTINUE TO RESPOND VOLUNTARILY TO THE PATRIOTIC CALL OF THEIR NATION?

THE ARGUMENT ever advanced by Autocracy is, that the people of a nation will not voluntarily support their national government effectively in a crisis. Autocracy maintains that no people are sufficiently imbued with patriotic principles, overcoming their selfishness to an extent that they may be depended upon for a voluntary sacrifice of conveniences and pleasures that will make its military power as efficient as that of a nation whose citizens are subject to absolute command.

Democracy has set up a different claim, the basis of which is, that individual liberty promotes a higher sense of duty and inspires greater sacrifices because it distributes the responsibility for the welfare of the nation to all its inhabitants.

Each and every citizen in a Democracy shares in the direction of its government; no man, nor small group of men, may direct his destiny and he yields only to the voice of the majority. In many things, included among which is the degree of support he shall contribute to his government, he is at liberty to administer his own affairs.

Therefore, the question at issue in this great world war, which has been very clearly defined as a war between Autocracy and Democracy, is very plain:

IS VOLUNTARY PARTIOTISM AS EFFECTIVE AS ENFORCED OBEDIENCE?

Although the question was answered very emphatically when the call came for the first Liberty Loan, Autocracy has come back with the assertion that that was but a single test.

"Wait until the second call goes out," it says, "and it will be seen how deeply rooted is this spirit of bravado patriotism!"

Autocracy is watching the response the American people make to the second call for a Liberty Loan with intense interest. Its complete success will upset Autocracy's traditions held for thousands of years. It will mean the vindication of principles for which Democracy stands.

Are you doing your bit to make that vindication an assured reality?

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DUE TO MISINFORMATION THE PROMPTNESS WITH WHICH THE CLAIM, COVERED BY THE BELOW LETTER, WAS SETTLED—WAS QUESTIONED BY A NUMBER OF JOVIANS. THE LETTER IS PUBLISHED AS THE BEST POSSIBLE PROOF THAT THE INSURANCE COMPANY IS ENTITLED TO PRAISE NOT CRITICISM

NATIONAL QUALITY

BRYAN-MARSH DIVISION

NATIONAL LAMP WORKS OF GENERAL ELECTRIC CO.

MANUFACTURERS OF

HIGH GRADE INCANDESCENT LAMPS

MAIN OFFICE

CHICAGO

ST. LOUIS - MINNEAPOLIS - DENVER - OAKLAND - NEW ORLEANS

CHICAGO, ILL.

Oct. 5, 1917

RECEIVED
OCT 8 1917
Ans'd.

Mr. Lynton T. Block,
Jovian Department,
Employers Indemnity Corporation,
St. Louis, Mo.

In re: ERNEST H. HAUGHTON - Deceased.

Dear Sir:-

We are pleased with the record time and the brief claim blanks required in payment of claim for accidental death of Mr. Haughton.

We delivered to Mr. D. A. Stoker, Representative of the Corporation, Claimant's Certificate of Death, of the late Mr. Haughton, the only claim blank required by Mr. Stoker, at 4 P. M. yesterday.

This morning Mr. Stoker handed us the Corporation's check of $5,000, payment in full.

It is unusual to receive payment so promptly and with complete absence of "red tape".

Yours very truly,

ESTATE OF ERNEST H. HAUGHTON-Deceased.

By J. H. Early Administrator.

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NOMINATIONS FOR THE 16TH JOVIAN ADMINISTRATION

REGULAR TICKET

NOMINATED BY THE OFFICIAL NOMINATING COMMITTEE

W. N. MATTHEWS, Po. 496-44V, St. Louis, Chairman.
CHARLES W. HOBSON, Po. 1, Dallas.
E. FREEMAN, Po. 7178, Chicago.
JOHN A. BRITTON, Po. 7380, San Francisco.

SIXTEENTH JUPITER
J. F. STRICKLAND, Po. 30,
Texas Power & Light Company, Dallas, Texas.

SIXTEENTH MERCURY
ELL C. BENNETT, Po. 3932-13V,
St. Louis, Mo.

SIXTEENTH CONGRESS

DISTRICT No. 1
WILLIAM R. PHIPPS, Po. 10676,
Brush Electric Company, Galveston, Texas.

DISTRICT No. 2
JOSEPH INSULL, Po. 16729,
General Electric Company, Pittsfield, Mass.

DISTRICT No. 3
HARRY W. ALEXANDER, Po. 17191,
care Society for Electrical Development, New York City.

DISTRICT No. 4
ARTHUR G. PIERCE, Po. 2896,
Cutler -Hammer Manufacturing Company, Pittsburgh, Pa.

DISTRICT No. 5
ROBERT MONTGOMERY, Po. 6147,
Louisville Gas & Electric Company, Louisville, Ky.

DISTRICT No. 6
JULIEN BINFORD, Jr., Po. 1174V,
Westinghouse Lamp Company, Atlanta, Ga.

DISTRICT No. 7
W. R. POWER, Po. 2784,
Consolidated Heat, Light & Power Company, Huntington, W. Va.

DISTRICT No. 8
GALEN CROW, Po. 925,
Public Service Company of Oklahoma, Guthrie, Okla.

DISTRICT No. 9
L. O. RIPLEY, Po. 7042V,
Kansas Gas & Electric Company, Wichita, Kan.

DISTRICT No. 10
HENRY N. REMINGTON, Po. 678V,
Central Illinois Light Company, Peoria, Ill.

DISTRICT No. 11
WILLIAM T. WALLACE, Po. 1716,
Idaho Power Company, Boise, Idaho.

DISTRICT No. 12
H. L. WOOLFENDEN, Po. 1062V,
Allis Chalmers Company, Denver, Colo.

DISTRICT No. 13
J. N. COLKITT, Po. 2627,
John A. Roeblings' Sons Company of California, Los Angeles, Cal.

DISTRICT No. 14—Vacant.
DISTRICT No. 15—Vacant.

STATESMEN

ARKANSAS
C. J. GRIFFITH, Po. 13901,
Little Rock Railway & Electric Company, Little Rock, Ark.

ARIZONA, CALIFORNIA, NEVADA
LEWIS E. SPERRY, Po. 9415,
New York Insulated Wire Company, San Francisco, Cal.

IDAHO
ERNEST C. KIERSTED, Po. 10258,
Care Idaho Power Company, Twin Falls, Idaho

IOWA
H. W. GARNER, Po. 19507,
Des Moines Electric Company, Des Moines, Iowa.

ILLINOIS
L. C. SPAKE, Po. 15397V
Western Editor, McGraw-Hill Pub., Chicago, Ill.

INDIANA
WALLACE O. LEE, Po. 11440,
Indianapolis Light, Heat & Power Company, Indianapolis, Ind.

KENTUCKY
J. B. RILEY, Po. 5297,
Westinghouse Lamp Company, Louisville, Ky.

LOUISIANA
W. A. PORTEOUS, Po. 9226,
care Western Union Telegraph Company, New Orleans, La.

MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA
W. H. VILETT, Po. 3675V,
Sterling Electric Company, Minneapolis, Minn.

MARYLAND
J. G. LIVINGSTON, Po. 1721,
care Southern Electric Company, Baltimore, Md.

MASSACHUSETTS
C. B. BURLEIGH, Po. 398,
Care General Electric Company, Boston, Mass.

MISSOURI
FRED JOHNSON, Po. 177V,
Wagner Electric Manufacturing Company, St. Louis, Mo.

NEW JERSEY, DELAWARE
H. C. STERLING, Po. 11014,
Atlantic City Electric Company, Atlantic City, N. J.

STATESMEN—Continued

NEW MEXICO
J. A SHEPARD, Po. 16106,
care Deming Ice & Electric Company, Deming, N. M.

NEW YORK
E. G. HINES, Po. 16222,
Electrical World, 239 West Thirty-Ninth Street, New York, N. Y.

OHIO
J. M. BATEMAN, Po. 2610V,
Western Electric Company, Cleveland, Ohio.

OKLAHOMA
CHARLES McCALLUM, Po. 3394,
Western Electric Company, Oklahoma City, Okla.

OREGON
A. S. MOODY, Po. 4576,
Care Pacific States Electric Company, Portland, Oregon

RHODE ISLAND
E. R. DAVENPORT, Po. 8019,
Care Narragansett Electric Light Company, Providence, R. I.

SOUTH CAROLINA
W. W. FULLER, Po. 16462,
Care of Isle of Palms Traction Company, Charleston, S. C.

TENNESSEE
C. J. R. WATSON, Jr., Po. 2131V,
care Electric Supply Company, Memphis, Tenn.

TEXAS
HIRAM O. CLARK, Po. 6629,
Houston Lighting & Power Company, Houston, Texas.

UTAH
CHAS. H. TALMAGE, Po. 1431,
care Western Electric Company, Salt Lake City, Utah.

VERMONT
E. E. LARABEE, Po. 1145,
Care Twin States Gas & Electric Company, Bennington, Vermont

VIRGINIA
GUY E. SILER, Po. 7479,
Care Virginia Railway & Power Company, Richmond, Va.

WISCONSIN
CARL GOLIN, Po. 12385V,
Northwestern Storage Battery Company, Milwaukee, Wis.

PROVINCE OF ALBERTA
NORMAN S. RICHARDS, Po. 8985,
Care Northern Electric Company, Calgary, Alberta

PROVINCE OF MANITOBA
J. H. SCHUMACHER, Po. 4742,
Care Schumacher-Gray Company, Ltd., Winnipeg, Manitoba

PROVINCE OF QUEBEC
E. N. HYDE, Po. 1614,
Care Northern Electric & Manufacturing Co., Ltd., Montreal, Quebec

(NOTE.—The chairman of the Nominating Committee states that Congressional Districts numbered 3, 14 and 15, and those states not covered by nominations in the above list, are being carefully canvassed, and will be covered by nominations at an early date).

ADDITIONAL NOMINATIONS

The Jovian Constitution provides that, in addition to the "Regular Ticket" selected by the Nominating Committee, any member in good standing may be nominated for any elective office (provided that he is not disqualified by some provision of this Constitution) by a petition signed by not less than one hundred members in good standing, provided that such petition or petitions must be delivered to Mercury not later than the first day of September. Mercury shall publish such nomination, or nominations, in each issue of the Jovian official publication prior to the then next Annual Convention under the heading: "Independent Ticket, Nominated by Petition."

PENNSYLVANIA ELECTRIC ASSOCIATION CONVENTION

THE TENTH annual meeting of the Pennsylvania Electric Association was held at Bedford Springs, Pa., September 7 and 8. Practically all of the time of the convention was devoted to the consideration of problems confronting the utilities in the state arising from war conditions. A number of speakers pointed out the seriousness of the crisis facing the industry. The operation of various properties has become exceedingly difficult, it was frequently asserted.

Among those who addressed the meeting were: President, George B. Tripp, Po. 1126; Joseph B. McCall, Po. 17933, president, Philadelphia Electric Company; John W. Lieb, Po. 11977, president, National Electric Light Association, and W. D. B. Ainey, chairman of the Pennsylvania Public Service Commission.

The following officers were elected to serve during the ensuing year: President, Henry N. Muller, Pittsburgh; first vice-president, Thomas Sproule, Po. 3747, Philadelphia; second vice-president, Ernest H. Davis, Po. 4613V, Williamsport; treasurer, W. R. Kennedy, Connellsville; secretary, Henry M. Stine, Po. 18876, Harrisburg.

The executive committee of the association remains unchanged.

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Personal Pointers

As time, the reaper of all mortal things,
Upon its mission passes you and me,
We mark with care the changes that it brings
Evolving progess from activity.
Each interest centers chiefly in its sphere—
Our little worlds that compass us about—
The smile of fortune, losses, hope and fear;
The faces coming in and passing out.

* * * *

W. H. P. Hill, Po. 14910, formerly with the Northwestern Electric Company at Portland, Ore., is now sales manager of the Idaho Power Company, Boise, Idaho.

* * * *

G. B. Sanford, Po. 14913, formerly connected with the Great Western Power Company at Rio Vista, Cal., has been appointed district manager of that company at Sacramento, Cal.

* * * *

H. E. C. Winshurst, Po. 17098, formerly electrical engineer for the Diehl Manufacturing Company, Elizabeth, N. J., is now a second lieutenant in the Engineering Corps of the Army.

* * * *

J. B. Yuergens, Po. 19442, of the accounting department, W. D. Gale, Inc., Detroit, Mich., has been called to the colors. He left Detroit for the training camp September 21.

* * * *

Freling Foster, Po. 18755, has joined the advertising staff of the Society for Electrical Development. He was formerly advertising manager of the Hughes Electric Heating Company, Chicago.

* * * *

E. V. Pryor, Po. 9172, was recently appointed new business manager of the Jefferson City (Mo.) Light, Heat & Power Company. Jovian Pryor was formerly with the Illinois Traction Comapny.

* * * *

J. E. Harsh, Po. 16509, formerly general manager of the Salina (Kan.) Light, Power & Gas Company, is now general manager of the Lincoln (Neb.) Gas & Electric Light Company.

* * * *

Raymond W. Wales, Po. 18830, has resigned his position as manager of the appliance department with the Waterloo Electric Supply Company, of Waterloo, Iowa, to enlist in the aviation corps.

* * * *

Harvey B. Wheeler, Po. 11033, has been appointed supervising engineer, by the National X-Ray Reflector Company, of Chicago, His headquarters are 120 West 11th Street, Kansas City, Mo.

* * * *

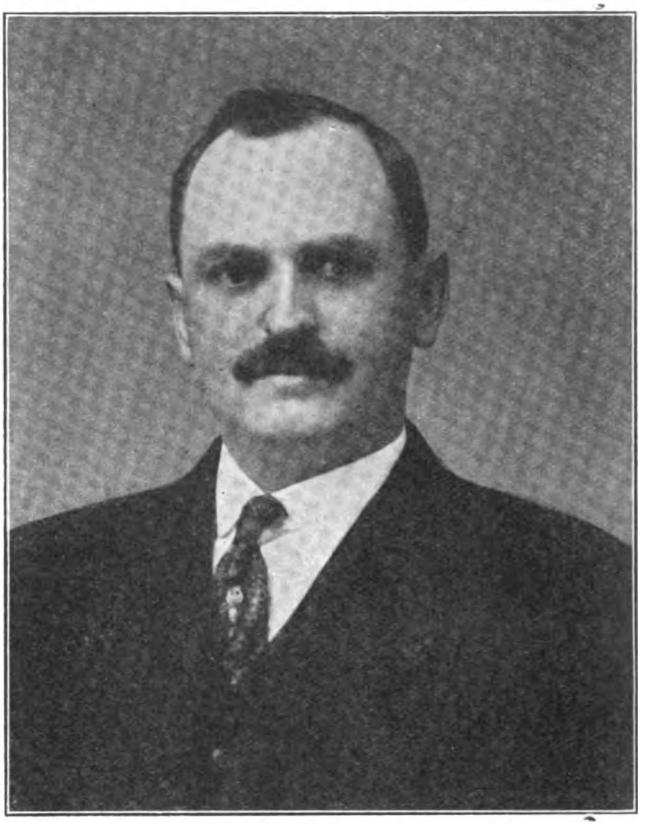
M. L. Derge, Po. 6916, has been appointed general manager of the Salina (Kan.) Light, Power & Gas Company. He was formerly general superintendent of the Trumbull Public Service Company, Warren, Ohio.

* * * *

John H. Baker, Po. 18977, has resigned as sales manager of the Diehl Manufacturing Company, to go into business for himself. Jovian Baker had been connected with the Diehl Company for over eight years.

* * * *

W. C. Kerr, Po. 14676, who was formerly construction engineer for the Philadelphia Rapid Transit Company, is now on the engineering staff of the Republic Railway & Light Company, New York City.



O. H. CORKEN, Po. 19327, President of the Oklahoma City Jovian League. Jovian Corken is manager of the Corken Machinery Supply Company of Oklahoma City. His activities in the local league has brought about his election as its president.

* * * *

D. R. Shearer, Po. 7889, formerly engineer for the Boone Fork Lumber Company, Shultz Mills, N. C., has opened offices in the Banon Building, Johnson City, Tenn., and is now engaged in the practice of engineering.

* * * *

Thomas H. Bibber, Po. 158V, Twelfth Pluto, was presented with a beautiful diamond scarf pin by the executives of his firm, The Luminous Unit Company, at a picnic recently held in connection with its sales conference in St. Louis, Mo.

* * * *

A. S. Lawrence, Po. 10179, formerly with the Illinois Electric Company, Chicago, has resigned his position with that company and is now connected with the Chicago Insulated Wire Company, 23 West Jackson Blvd., Chicago.

* * * *

E. H. Davis, Po. 4613V, past president of the National Electric Light Association and president of the Lycoming Edison Company, Williamsport, Pa., has been suffering from a dislocated shoulder, which he received in a fall in New York City a short time ago.

* * * *

Elbert F. Norton, Po. 17513, sales engineer with the Standard Underground Cable Company, at Chicago, has been commissioned a major in the Engineers' Reserve Corps, U. S. A., and is now in training at Fort Leavenworth, Kan.

* * * *

G. B. Weber, Po. 3614, has been made sales manager of the Benjamin Electric & Manufacturing Company. He has been connected with the sales department of the Chicago office of the firm for the past seven years.

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BOB ELDRIDGE, Po. 2882, manager of The Royal Electric Company of Pittsburgh who will form a life partnership October 27. Dan Cupid is the promoter of the company, and Miss Hazel Taggert Hammerle of 1813 Charles Road, East Cleveland, Ohio, has consented to direct its destinies

BOYD E. HANNON, Po. 16204, manager of the Sacramento (Cal.) division of the Great Western Power Company, has resigned his position and enlisted in the Signal Reserve Corps of the United States Army.

* * * *

G. A. JOHNSTONE, Po. 9000, is president of the Great Lakes Electric Manufacturing Company, a company organized during this year to manufacture motors and generators. The company is located at 700 West Twenty-second Street, Chicago

* * * *

J. B. OLSON, Po. 307, general sales manager of the Habirshaw Electric Cable Company of New York City, has been made assistant secretary of the company. Jovian Olson's headquarters are the general offices of his company, 10 East Forty-Third Street.

* * * *

W. W. DEARTH, Po. 18247, formerly with the Western Electric Company, at St. Paul, Minn., is now with the Wesco Supply Company, of St. Louis, Mo., covering territory ajacent to St. Joseph, Mo., at which point he is making his headquarters.

* * * *

F. H. Poss, Po. 994, formerly sales and advertising manager of the Chicago district of the Benjamin Electric & Manufacturing Company, has resigned his position to return to San Francisco. He will take up the work of distribution of Avery tractors in Western territory.

* * * *

JACK H. FROHLICH, Po. 12406, formerly with the Frank Seaman Advertising Agency, New York, has joined the staff of the Society for Electrical Development, and is in the publicity department, of which Harry W. Alexander, Po. 17191, Statesman-at-Large, is director.

E. H. CHENEY, Po. 17349, district manager for the Wagner Electric Company, met with a serious accident August 17, in which the ligaments in his instep were broken. It was necessary to put his foot and limb in a plaster cast and he was confined to his bed for several weeks.

* * * *

L. O. VASER, Po. 9670, has resigned his position as electrical superintendent for the Aluminum Company of America and the St. Lawrence River Power Company at Massena, N. Y., to accept a position on the engineering staff of the Electric Bond & Share Company, New York City.

* * * *

F. G. CALDWELL, Po. 4977, who has been in charge of the service department of the Western Electric Company at Houston, Tex., for a number of years, is now covering territory in the vicinity of Fort Worth for that company, making his headquarters in the latter city.

* * * *

WILLIAM F. EASTMAN, Po. 17195, general manager of the Technical Journal Company, Inc., has been granted a leave of absence in order to enter the Reserve Officers Training Camp at Plattsburg, N. Y. He has been assigned to the artillery division, and expects to qualify as a first lieutenant.

* * * *

L. J. LEMEN, Po. 13195, formerly connected with the new business departments of the Montgomery Light & Water Power Company and the Toledo Railways & Light Company, has been appointed new business manager of the Massillon Electric & Gas Company.

* * * *

O. H. SIMONDS, Po. 10325, has been appointed general manager of the Dubuque (Iowa) Electric Company. He was formerly general manager and purchasing agent for the Vicksburg (Miss.) Light & Traction Company. Both properties are controlled by Elston & Company of Chicago.

* * * *

MORGAN T. COAKLEY, Po. 16870, of the Robertson Cataract Electric Company, Buffalo, N. Y., is now a lieutenant in the Engineers' Section Officers' Reserve Corps. Jovian Coakley upholds the traditions of his family by his enlistment. His father was a captain in the medical corps of the Confederate army, and his grandfather, Capt. William Tew, served in the American Revolution.

* * * *

CLARK E. DIEHL, Po. 18863, manager of the Postal Telegraph Company at Harrisburg, Pa., has been elected president of the International Association of Municipal Electricians. Jovian Diehl is also connected with the municipal service of the city of Harrisburg, having supervision over its fire alarm system. He has been manager of the Postal office ever since it was opened in the early eighties.

* * * *

JOHN W. ST. JOHN, Po. 12836, has been appointed assistant manager of the St. Paul (Minn.) Gas Light Company. He was formerly secretary and treasurer of the Madison Gas & Electric Company. His appointment is in the nature of a promotion, as both companies are controlled by the American Light & Traction Company of New York City.

* * * *

HENRY J. HORNUNG, Po. 5370, for the past ten years affiliated with the electrical jobbing business and recently connected with the Fullerton Electric Company, is now secretary of the H. Russell Brand's Business Laboratories and manager of the New York Office Appliance & Supply Company, with offices on the fifty-first floor of the Woolworth Building, New York City.

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STEPHEN GARDNER, Po. 10909, has resigned his position with the sales department of the Westinghouse Electric & Manufacturing Company to accept an executive position with the Greenlee interests of Chicago. Jovian Gardner had been connected with the Westinghouse Company for thirteen years. He has been in the electrical business since 1896, having entered the employ of the Commonwealth Edison Company at that time.

* * * *

JOHN H. LUCAS, Po. 18911, president of the Kansas City (Mo.) Light & Power Company, who has directed its affairs practically since its reorganization, has retired from that position. One of his greatest tasks was that undertaken last year for the erection of a plant large enough to supply the whole community. This entailed the necessity of working out plans for the maintenance of service under the new form of government. Prior to his connection with the company Judge Lucas' activities were devoted wholly to the law.

* * * *

LAWRENCE E. GOULD, Po. 2125, who has been industrial editor of the Electric Railway Journal of Chicago for a number of years, has organized the Economy Electric Devices Company, which will act as exclusive sales agent for the railway products of the Sangamo Electric Company, Chicago. Jovian Gould received his electrical engineering education at Cornell University. He became associated with the Electrical Railway Journal as electrical editor in 1905, and was shortly afterwards made its editor-in-chief. Later when the paper was consolidated with the Street Railway Journal he was appointed western editor.

* * * *

E. M. WALKER, Po. 10326, has resigned as general manager of the Dubuque Electric Company, a position he has held for the past five years. Under Jovian Walker's management the company made wonderful progress, its gross earnings increased approximately 50 per cent and the number of lighting customers was nearly trebled. One of his achievements was the winning of a bronze and silver cup for selling more Liberty Bonds than any other individual in the city, his subscriptions totaling $85,000. He has taken an active part in association work and served as president of the Iowa Section of the N. E. L. A. in 1915.

* * * *

H. C. BLACKWELL, Po. 3957, vice-president and general manager of the People's Light Company, Davenport, Ia., has tendered his resignation to accept a position as general manager of the Kansas City Light & Power Company, Kansas City, Mo. Jovian Blackwell is a graduate of Purdue University, Class of '02. Following his graduation he was connected with Wm. B. Schafe & Sons Company, Pittsburgh, and later chief engineer of the Wabash R. R. Company. He became associated with Jos. F. Porter, Po. 2097, now president of the Kansas City Company, when the latter was with the J. J. White Company.

* * * *

A. S. LINDSTROM, Po. 18938, formerly connected with the Western Electric Company, has been appointed general manager of the Thordarson Electric Manufacturing Company, Chicago. After leaving the Western Electric Company, Jovian Lindstrom spent some time on the Pacific coast, where he constructed a number of independent telephone plants and engaged in the practice of general consulting engineering. He was assistant chief of the department of machinery exhibits in Machinery Hall at the Panama-Pacific International Exhibition, and later in charge of the exhibit of the Thordarson Company at the exposition.

* * * *

M. S. SLOAN, Po. 2700, manager of the railway and electrical departments of the New Orleans Railway & Light Company, has been appointed vice-president and general manager of that company. Jovian Sloan is a graduate of the Alabama Polytechnic Institute. He started his career with the General Electric Company. In 1906 he was made chief engineer of the Birmingham (Ala.) Railway, Light & Power Company. From this position he was promoted to that of assistant superintendent of the lighting and power departments of the company and later to that of superintendent of power. He became connected with the New Orleans utility in 1913.

* * * *

HAROLD V. BOZELL, Po. 7895, who has been professor of electrical engineering at the University of Oklahoma for the past nine years has resigned his post with the Oklahoma University to become assistant professor of electrical engineering of the Sheffield Scientific School of Yale University. While professor at the University of Oklahoma, Jovian Bozell was very active in engineering affairs of a public nature. He was a member of the Oklahoma Committee on industrial preparedness, being a representative of the A. I. E. E. in that body. He was also one of the organizers of the Oklahoma Electric Railway Association, and served the organization as secretary for a number of years.

* * * *

JOS. F. PORTER, Po. 2097, has been elected president of the Kansas City Light & Power Company by its board of directors to succeed J. H. LUCAS, Po. 18911, resigned. Jovian Porter was president of the Tri-City Railway & Light Company, the Tri-City Railway Company, the Peoples Light Company, the Clinton, Davenport & Muscatine Railway Company, the Moline, Rock Island & Eastern Traction Company, the Moline Lighting Company, the Peoples Power Company and the Moline-Rock Island Manufacturing Company. He is a graduate of Ames College, class of 1884. His first activities in the electric field was in connection with the construction of the electric lighting and street railway properties for the Edison interests, and for J. G. White & Company.

CHARTERED
JOVIAN LEAGUES

Cincinnati	Charter	No. 1
Kansas City, Mo.	"	No. 2
Pittsburgh	"	No. 3
Minneapolis	"	No. 4
St. Joseph, Mo.	"	No. 5
Louisville, Ky.	"	No. 6
Stark County Jovian League Comprising the towns of Massillon, Canton and Alliance, Ohio.	"	No. 7
Tulsa, Okla.	"	No. 8
Eau Claire, Wis.	"	No. 9
Harrisburg, Pa.	"	No. 10
Wichita, Kan.	"	No. 11
Winnipeg, Man.	"	No. 12
Bay City, Mich.	"	No. 13
Milwaukee, Wis.	"	No. 14
Port Arthur, and Fort William, Ont.	"	No. 15
Oklahoma City	"	No. 16
Galveston, Texas	"	No. 17
Muskogee, Okla.	"	No. 18
Mansfield, Ohio Comprising Richland and Ashland Counties	"	No. 19
St. Louis	"	No. 20
Southwestern Michigan Jovian League Benton Harbor, Michigan	"	No. 21

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NEWS OF JOVIAN LEAGUES

New York Some of the details of how New York City investigates its own affairs were outlined by Deputy Commissioner of Account, Clarence King, at the first luncheon meeting of the New York League held at Stewart's Restaurant, September 12.

John F. Gilchrist, Po. 3219-34, vice-president of the Commonwealth Edison Company, Chicago, was a visitor and spoke on the part the electrical industry is playing in the great war.

President, Arthur Williams, Po. 1917, presided.

A meeting of the Jovian League Joint Committees was held at Brownes' Chop House, September 19. Jas. H. Betts, Po. 6765, Fourteen Vulcan, Chairman of the committee, presided. J. Lloyd Prince, Po. 4263, officiated as secretary.

Chairman Betts made a call for volunteers to serve on the Jovian Bond Committee and every member present responded.

Announcement of speakers for the luncheon meetings of October and November was as follows: October 3, Commissioner Adams; October 23, Mayor Mitchel; November 7, Rev. Dr Pettit; November 7, Williams J. Burns.

Frank E. Watts, Po. 1509-47, Past Jupiter Eleven, was appointed a committee of one to consult with the officers and arrange for a luncheon to be tendered visiting delegates and members to the Annual Jovian Convention on October 23.

The following appointments were made to fill vacancies in committees: Membership Committee, Drake V. Smith, Po. 3654; Reception Committee, Wm. G. Chaman; Entertainment Committee, Louis K. Halaschi.

* * * *

Cleveland The first luncheon meeting of the season of the Cleveland League was held September 6. Glen Martin, the famous aviator, was the speaker of the occasion.

F. C. Foster, presided as chairman.

Details of the plans for the activity of the League during the season were outlined and included, among other things, the installation of a dance floor in the club dining room; an educational meeting to be held one each month; the installation of a game room, equipped with billiard tables, etc.; educational classes; activity in Red Cross work and other features.

Dr. A. B. Meldrum was the speaker at the meeting of September 13. He injected some good, humorous Scotch stories into his address that were highly entertaining.

Billy Radcliff, who had been announced as speaker was unavoidably prevented from being present at the meeting, September 20, and Peter Witt delivered an interesting address on, "Taxation in All of Its Phases"

Announcement was made that the Bowling League would open its season, September 26, with a game at Helm's Alleys.

* * * *

Oklahoma City At a recent meeting of the Oklahoma City League the following officers were elected to preside during the ensuing year: President, O. K. Corken, Po. 19327; vice-president, Wm. Stout, Po. 961; secretary-treasurer, A. L. Mullergren, Po. 18853; executive committee, H. E. Musson, Po. 7899; F. J. Meyer, Po. 1484.

At a meeting of the executive committee, September 12, plans for the future were discussed and an outline of the League's activities for the coming year arranged.

About thirty members were in attendance at the regular luncheon meeting, September 10. Short addresses were made by J. F. Owen, Po. 19818, manager, Muskogee Gas & Electric Company, Mr. Riley, consulting engineer, H. M. Byllesby & Company and Mr. Varce, manager, Choctaw Light & Power Company.

St. Louis Captain Charles Dolphin, of the Canadian Flying Corps, made an inspiring address on, "My Experience on the Western Battle Front," before the St. Louis Jovian League at its first luncheon meeting of the season, September 25.

Lieut. Col. Harry D. McBride, Po. 13817, presided as speaker.

W. N. Matthews, Po. 496-44V, Past Jupiter Twelve, President of the League, announced the appointment of the following members as chairmen of the various committees: Speakers Committee, H. J. Pettengill, Po. 119; Entertainment Committee, Thos. H. Bibber, Po. 158V, Twelfth Pluto; Publicity Committee, W. R. Joyes, Po. 13813; Assembling Committee, Chas. A. Dostal, Po. 5759; Development Committee, Martin J. Wolf, Po. 6027V, Fifteenth Ajax; Public Affairs Committee, Fred B. Adam, Po. 242V; Finance Committee, Horace W. Beck, Po. 9617; Membership Committee, Jules A. Baker, Po. 18518; Door Committee, R. E. Stewart, Po. 11738; Visiting and Relief Committee, Cliff Croninger, Po. 9624V; Resolution Committee, Ell C. Bennett, Po. 3932-13V, Mercury.

J. Lionberger Davis, president of the St. Louis Chamber of Commerce addressed the Luncheon meeting, October 2, on "The New Liberty Bond Issue."

At a meeting of the executive committee of the League held at the American Hotel, October 3, plans were presented by Martin J. Wolf, Po. 6027V, chairman of the Development Committee, for the organization of educational classes.

* * * *

Chicago The first Luncheon meeting of the season was held by the Chicago League, September 27. Judge Charles S. Cutting, prominently identified with Cook County affairs since 1874, addressed the meeting, which was held at the Sherman Hotel.

P. R. Boole, Po. 155, officiated in the capacity of auctioneer, and auctioned off 12 prizes left over from the annual outing. The amount realized from the auction was $271.50, which was contributed to the Red Cross.

Secretary W. H. Hodge read a few letters from the boys at the front.

At a meeting of the Board of Managers, six new members were accepted.

* * * *

MANSFIELD LEAGUE ELECTS OFFICERS

ELECTION of officers for the ensuing year and arrangements for a Rejuvenation to be held within the month were features of a meeting of the Mansfield Jovian League held September 13. It was expected that between twenty and thirty applications for membership would be filed with First Tribune, J. L. Stone, Po. 19724, before the date set for the Rejuvenation.

The following officers were elected: President, Edward B. Snyder, Po. 19753; vice-president, H. Scott Robeson, Po. 13200; secretary, H. A. Waite, Po. 19886; treasurer, R. V. Cairns, Po. 15427. S. Glen Vinson, Po. 19756, and Ernest R. Hartman, Po. 15428, were elected to the executive committee.

* * * *

OUR PURPOSES

THE PURPOSES of the United States in this war are known to the whole world, to every people to whom the truth has been permitted to come. We seek no material advantage of any kind. We believe that the intolerable wrongs done in this war by the furious and brutal power of the Imperial German Government ought to be repaired, but not at the expense of the sovereignty of any people—rather a vindication of the sovereignty both of those that are weak and those that are strong. * * * Peace must be based upon justice and fairness and the common rights of mankind.—From President Wilson's Reply to the Pope.

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WESTERN ELECTRIC SALES CONFERENCE AT CLEVELAND

Almost like a Jovian reunion or convention was the sales conference of the Western Electric Company recently held in Cleveland, as the above photograph reveals. Twenty of those included are members of the fraternity from nearly every section of the country.

Top row, left to right: H. R. Lemon, Po. 3842, Cleveland; W. E. Lotspeich, Po. 12476, Atlanta; W. J. Laufenburg, Po. 1423, Denver; J. G. McNeely, Po. 4826, Pittsburgh; H. C. Olmstead; Po. 10194; W. M. Goodrich, Po. 2658; W. P. Hogland, Chicago, Frank Van Gilluwe, Richmond; R. W. Tavey, Po. 2926, Philadelphia; Jules A. Baker, Po. 18518, St. Louis; F. W. Koch, Po. 3132, New York; F. C. Andrews, Po. 10716, Los Angeles; L. M. Dunn, Po. 3132, Pittsburgh; C. E. Fee, Po. 3801V, New York.

Middle row: L. J. Brown, Po. 7716, San Francisco; T. J. Rider, Jr., Po. 2677, Chicago; W. H. Van Skaik, Po. 2995, Omaha; C. L. Wells, Kansas City; M. D. Riley, Boston; Chas. Clark, Newark; Geo. S. Watts, Po. 15787, St. Louis; J. E. Cameron, Po. 2165, Minneapolis; F. N. Cooley, Po. 9328, Seattle.

Bottom row: E. H. Beyersdorfer, Cincinnati; A. H. Nicoll, Salt Lake City; D. B. Kase, Philadelphia; W. P. Worley, Po. 7687, Dallas; H. L. Houchins, Po. 19711, St. Louis, and. Chapman, of Buffalo.

SEPTEMBER REJUVENATIONS

OKLAHOMA CITY

THE LECTURE form was used in a very impressive way at the Rejuvenation held at the Skirvin Hotel in Oklahoma City on the evening of September 28.

Statesman-at-Large, Galen Crow, Po. 925V, officiated in the capacity of instructor and presided as toastmaster at the Joviation.

There were two candidates initiated.

Following the initiation ceremony, the members joined in a general discussion of plans for the future activities of the League.

H. C. Hoagland, Po. 13903, and W. Porter Jones, Po. 14426, made instructive addresses.

According to reports, A. L. Mullergren, Po. 18853, deserves special mention for his activities in making the affair a success.

* * * *

MANSFIELD, OHIO

JUST a little over sixty days after holding a successful Rejuvenation in July, Mansfield Jovians came back with another, September 18, almost equally as successful.

There were sixteen candidates present to be initiated and fifty members were in attendance at Eagles Hall to participate in the initiation ceremonies and the Joviation.

First Tribune, JAS. L. STONE, Po. 19724, was in charge of the arrangements and presided as toastmaster of the Joviation.

GEORGE S. MILNER, Po. 2457, representing the Jovian International Speakers' Committee was the principal speaker of the occasion.

Among the guests were: R. S. Dunning, Po. 16471, secretary, Cleveland League; George S. Lowney, Po. 19746, mayor of the City of Mansfield; Chas. Williams, Po. 19759, secretary of the Chamber of Commerce, and Jos. F. Sells, Po. 3797, of Cleveland.

Members, who from reports deserve special mention for their activities, are: Jos. Parrott, Po. 19723; H. Scott Robeson, Po. 13200; George Ralston, Po., 19750, and H. C. McCutchan, Po. 10753.

The following Degree Team conferred the initiation: Jupiter, Jas. L. Stone, Po. 19724; Neptune, D. H. Hite, Po. 19879; Pluto, W. M. Giles, Po. 19375; Vulcan, H. S. Robeson, Po. 13200; Mercury, R. V. Cairns, Po. 15427; Hercules, Jos. Parrott, Po. 19723; Mars, Gordon Gray, Po. 19876; Apollo, Tod Tapper, Po. 19331; Imps, George Ralston, Po. 19750; H. C. McCutchan, Po. 10759, and Chas. Williams, Po. 19759.

* * * *

THE PURPOSE OF THE SECOND LIBERTY LOAN

THE PURPOSE of the second Liberty Loan is outlined very clearly by Secretary of the Treasury McAdoo. It is the second call for the civilian population of the United States to back the fighting forces of the country, with food, equipment, clothing, ships and aeroplanes to prosecute the war to a finish. It is a call for the patriotic enlistment of dollars.

Besides being applied to the purposes outlined above, a part of the proceeds of the loan will be used for insurance for soldiers and to provide a monthly allowance for the dependent relatives of soldiers, provided the bills authorizing these provisions are passed.

We feel certain that the Jovian membership will co-operate in the sale of the second loan as heartily, and render as valuable a service in promoting the sale as it did in the campaign to sell the first issue, to which it contributed much assistance.

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

Two Roles of Life

By W. R. J.

At times in life when many things
go wrong,
When failure, illness, sorrow, bring
their care;
When clouds of gloomy thoughts about
you throng,
And you are almost ready to despair,

If some big-hearted fellow comes
to cheer,
And gives assurance he will see you
through,
Do not the words he speaks ring wondrous
clear,
And make the world look far more bright
to you?

Suppose we shift the scene and look
about,
While fortune favors you and brings
success?
Do you know any one who's down
and out—
Some fellow who is sick or in distress?

You do—well why not try on him
the plan
That in the other cast has such
appeal?
Suppose you take the role, "big-hearted
man,"
And see how fine your act will make
him feel?

* * * *

Extending the Spy System

NEPTUNE came up out of the sea, shook a few buckets of salt-water out of his hair and strode hastily up Mount Olympus. The old ruler of the waves appeared greatly agitated and walked hurriedly.

Bursting abruptly into the presence of the Mighty Jove, Neptune hurled his fish-fork upon the floor before the throne, and stood with flashing eyes, too agitated to speak.

"Well, what seems to have upset your equilibrium?" enquired Jove, short-circuiting a few static sparks that were playing leap-frog about the rim of his crown.

"Equi—nothing, it's those crazy Germans!" Neptune blurted.

Jove switched on a few more lights and glanced about the council hall.

"I suppose it's the submarines—have they been littering up your yard with wreckage again?"

"Oh, that! I'm accustomed to the wreckage by this time. Besides the sea-horses have quit kicking about moving the sunken ships out of the way since they have been finding so much oats in them."

"Then I suppose the noise of the torpedoes have upset your nerves?"

"No, I'm used to the explosions; they don't even awake me at night."

"Then they must have torpedoed a ship loaded with something that causes the water to bubble?"

"No!"

"Well, what in the blazes is it, anyway?"

"It's a German plot. They have a submarine hanging around disguised as a whale, and are trying to get the mermaids to revolt by telling them if Germany wins the war they will be allowed to take half of all the face-powder, cold cream and mirrors out of the sunken ships."

"And if the mermaids fall for it how are they going to help Germany?"

"Oh, they can't do anything. That is the reason I don't understand why the spies want them to revolt."

Jove switched off a few lights and started the static sparks in their game of leap-frog.

"Don't let that worry you, Nep, the Germans don't know, either. The poor spies have to report to some, kind of activity for the Kaiser to hold their jobs, and it is getting to be pretty hard to stir up anything on the earth since the people have found out how rank their plots are. I'm surprised that even the mermaids fell for them.

"Go back and tell them to set the dog-fish on the spy submarine and take all the mirrors and face-powder they want out of the sunken ships. They don't have to give Germany any of them."

"Thanks, Jove, that ought to satisfy them," Neptune replied.

Picking up his fish-fork, he went out the back way and dived off of a high peak.

* * * *

Beata Spaghett

By W. R. J.

Rosa Cavania ees fina da girl,
Lika da peach, mucha pretty an' sweet;
Weara da beads an' she weara da curl,
Alla time dressa so tidy an' neat.
Sammy Sarrato, who maka spaghett,
Maka da lova to Rosa an' sa'
"I laka to marry you Rosa, you bet,"
But Rosa she tella heem, "nota today."

Sammy he offer to buya fine ring,
Offer to tak her to seea fine show,
Offer to geev her mos' everating,
But Rosa refusa an' tella heem "No."
Tella heem "nothin' ees doa" so flat,
That Sammy he mopa an' sulka aroun'
Don't eata nothin' an' getta less fat,
Stopa da talk an' he watcha da groun'.

Doa no work an' da boss he discharge,
So Sammy he looka for job some where;
Goa to work in a beega garage,
Learna to drive an' to mak' da repair.
Coma for Rosa in beega machine,
An' Rosa she taka heem quick, you bet—
Fina da ting ees da gasoline,
Much better wina da girl than spaghett.

* * * *

October

By W. R. J.

A note of expectancy thrilling
Intensely the sounds in the air;
A freshness of breezes distilling
The fragrance of flowers once fair;
A rustle of leaves in their falling—
The purple, the brown and the red—
And the voice of October is calling—
Is calling that summer has fled.

A chill in the wind that is blowing
Its dreariness over the sky;
A feeling of cheerlessness growing,
A sound that resembles a sigh;
An absence of birds that were flying,
The droop of a rose as in fear,
And the voice of October is crying
A warning that winter is near.

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WINNIPEG ELECTRICAL SHOW BIG SUCCESS

THAT the Winnipeg Electrical Show, held September 3 to 8, was the most interesting affair of the kind ever held in that city has been attested to by many of those who attended; that it was the most successful is also apparent. From the hour of opening, 11 o'clock in the forenoon September 3, until its close, a steady stream of visitors kept the exhibitors and demonstrators busy showing their wares and booking orders.

The show was formally opened by Sir James Aikens, Lieutenant Governor of Manitoba.

From the time of opening until its close many expressions of admiration of the harmonious arrangement and the pleasing decorations were heard, and C. C. Chisholm, Po. 15945, the architect in charge, received many congratulations for the delightful effects he produced.

A health exhibit made by the Government of Manitoba, showing the spread of diseases and preventive remedies, attracted a great deal of attention.

Electrical exhibits included almost every kind of appliance and device known to the industry.

Electrically cooked meals were served on a commodious balcony during luncheon hours and refreshments at all hours during the show. This department was handled by the Ladies' Auxiliary of the Local Battalions; the proceeds being used to provide Christmas presents for the boys at the front.

The show had the generous support of the entire electrical industry, the Provincial Government and the City of Winnipeg. Never in the history of the electrical industry in Winnipeg has the Jovian slogan been so much in evidence.

With the exception of one man on the Publicity Committee, every one of the committees were made up of Jovians:

They are:

General Committee

J. M. Lemay, Po. 19401, chairman; E. H. Smith, Po. 4391, vice-chairman; C. T. Kummen, Po. 15957, Secretary.

Promotion Committee

A. E. Esling, Po. 4725, chairman; H. W. Billing, Po. 5054; L. R. Baker, Po. 12849; R. A. Sara, Po. 6007.

Interior Arrangements and Decorations

C. C. Chisholm, Po. 15945, chairman; L. B. Dickson, Po. 4724; F. E. Filer, Po. 3591V.

Services, Exterior Lighting

E. V. Caton, Po. 12852, chairman; G. J. Brown, Po. 5977.

Special Features, Entertainments

W. A. Duff, Po. 5968, chairman; F. A. Cambridge, Po. 15943; G. L. Guy, Po. 4727; Chas. F. Gray, Po. 15952; L. R. Baker, Po. 12849; A. E. Esling, Po. 4725.

Finance

R. A. Sara, Po. 6007, chairman; H. W. Billings, Po. 5054.

Publicity

H. W. Billings, Po. 5054, chairman; J. M. Leamy, Po. 19401; V. E. Josselyn.

Mailing List

J. G. Smith, Po. 10854.

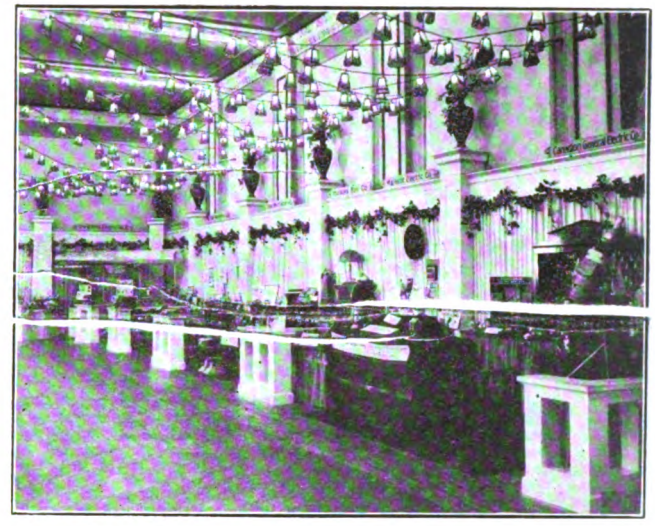
* * * *

ASSOCIATION OF EDISON ILLUMINATING COMPANIES HOLDS CONVENTION IN NEW YORK

THE ASSOCIATION of Edison Illuminating Companies held its annual convention in New York City, in the Engineering Societies Building, September 11. The meeting was called to order by Vice-President, L. L. Elden, who officiated in the absence of its President, Major P. Junkersfeld, Po. 10935, who is in the military service.

Owing to war conditions the convention was held merely to satisfy the requirements of the constitution. No entertainment of any nature was provided, nor were any papers read.

The report of the executive committee was presented by its chairman, John W. Lieb, Po. 11977. Jovian Lieb also presented a detailed report in behalf of the National Committee on Gas and Electric Service, regarding the work of the Washington headquarters. The Association of Edison Illuminating Companies is one of the national bodies co-operating with the committee.



View of Section of the Winnipeg Electrical Show

* * * *

KANSAS CITY NOMINATIONS FOR LEAGUE OFFICERS

AT A RECENT meeting of the nominating committee of the Kansas City League, nominations were made for officers to be submitted to a vote of the League. The following members who compose the committee were in attendance: C. F. Farley, Po. 1417, chairman; W. H. Ritterhoff, Po. 16578; F. M. Bernardin, Po. 250-7; E. S. Cowie, Po. 833V, and M. E. Bates, Po. 16550.

Nominations resulted as follows:

Executive committee: P. Lloyd Lewis, Po. 6018V; M. E. Bates, Po. 16550; J. G. Crane, Po. 13682, and E. E. Stigall, Po. 9588.

President: A. Penn Denton, Po. 1415V.

First vice-president: W. M. Hand, Po. 796.

Second vice-president: J. E. Launder, Po. 843.

Third vice-president: W. B. Satterlee, Po. 16579.

Fourth vice-president: J. F. Rossman, Po. 2468.

Secretary-treasurer: T. R. Harber, Po. 18908.

Write a Jovian Song

The B. H. Stief Jewelry Co.

offers a handsome piece of Jewelry for the best Jovian Song, to be selected by

JAS. A. CAYCE, Po. 2416, and ELL C. BENNETT, Po. 3932-13V, Mercury

All Jovians are eligible to participate in the contest. Submit your songs, either with or without music to

JOVIAN ORDER

1415 Syndicate Trust Building

ST. LOUIS, MO.

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FOR YOU

A Valuable, Necessary Service

Those men—whose voluntary testimonials are
have asked, received and are thankful. If you
to this great benefit DO NOT HESITATE LONGER;
reminding you that this plan affords you a
amount of your

TULSA, OKLA., E. A. WILCOX

"Find my check in the amount of $12.00 enclosed. The insurance plan outlined in circulars furnished is exceptionally fine, and the writer wishes to congratulate the Jovian Order upon its success in negotiating such an attractive proposition for its members. Little difficulty should attend the securing of applications from practically all members of the Order."

ST. PAUL, MINN., J. M. HANNAFORD, JR.

"This will acknowledge plans of accident and health insurance as offered by the Jovian Order, and I certainly want to compliment the Order on the thoroughness and general good that this new plan should accomplish."

LOS ANGELES, CAL., P. D. HOWSE

"I enclose $11.00, first quarterly payment on a double accident and health policy. The Order is to be congratulated that it has been alert to make such favorable terms for its members, and I am of the opinion that all should take advantage of its very low rate for accident and health insurance."

DES MOINES, IOWA, J. G. HARDENBURGH

"Enclosed find my check for $44.00, to cover double accident and health in the Department of Jovian Welfare. I wish you great success and consider this a great boon to Jovianism."

LOS ANGELES, CAL., R. B. CLAPP

"Herewith my application for a policy. This seems like a mighty good thing, and I hope it is meeting with the response it deserves."

Hand points the way — Do it today!

IF YOU SO DESIRE, DATE YOUR APPLICATION TO TAKE EFFECT WHEN SOME OF YOUR PRESENT INSURANCE EXPIRES — PAY NOT UNTIL YOU RECEIVE THE POLICY.

THE JOVI

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"I am enclosing check for $44.00, for which I wish you to send me one double accident and health policy. I believe your liberal offer to Jovians to be a much better policy for the insured, and I certainly think all Jovians will gladly cancel their policies and take out both accident and health insurance under the very favorable terms which the Jovian Order is offering its members."

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"I have your circular of the 27th in regard to the insurance proposition. It has been my intention to take out a health policy at once and an accident policy a little later. I am sending my application for a health policy only. I am very anxious to get in on this insurance proposition, which I consider a very fine thing for the members of the Order."

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"Please find my application for a double accident policy, also check for $24.00 premium for the full year. It surely is a much better arrangement for Jovians, and I cannot see how any real Jovian would hesitate to take out the insurance."

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"It pleases me very much to note that the Jovian Order has been able to put the insurance deal across. I would like to have you send me complete information, and I will use my best endeavors to get applications from our members."

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MILWAUKEE LEAGUE STARTS LUNCHEON SEASON, ALSO INAUGURATES BOWLING SEASON

MILWAUKEE Jovian League No. 14 held its first luncheon meeting of the season September 6, at the Plankington Hotel. Mr. Hanan, a member of the Milwaukee exemption board was the speaker of the day, taking for his subject, "Aspects of the Selective Draft."

A meeting of the League was held at the Plankington Hotel September 20, at which arrangements were completed for the opening of the Jovian League Bowling season, which started September 24.

H. F. Trester, Po. 17656, and T. Pholen, donated a bowling ball to be given the Jovian having the best attendance record at the end of the season. Chas. J. Kline, Po. 1589, donated individual prizes for each member of the winning team.

Announcement was made that a Rejuvenation would be held October 18, and a splended program is being arranged for the affair by the entertainment committee.

* * * *

OBITUARY

H. A. MAY, Po. 497, died at his home in New York City June 15, of pleural pneumonia after an illness of but a few days. Jovian May was sales manager for the firm of Stanley & Patterson, and at the time of his death had charge of the marine trade of the firm. He was forty-nine years of age, and had been a Jovian for eleven years having been rejuvenated at Niagara Falls September 11, 1906. He is survived by his wife and one son to whom The JOVIAN extends the sympathy and condolences of the fraternity.

(The delayed report of Jovian May's death was not received in time to include in earlier issues of The JOVIAN.)

* * * *

ETNA KUHLMAN, Po. 44, president of the Kuhlman Electric Company, died at his home in Bay City, Mich., on September 14, after an illness of five months.

Jovian Kuhlman was fifty-six years of age, having been born at Corunna, Ind., in 1861. He was a graduate of the University of Minnesota, Class of 1881. Following his graduation he returned to Indiana. He was one of the pioneers in the electrical business; his first venture being the organization of the Home Electric Light & Power Company, of Elkhart, Ind., in 1902. Later he disposed of his interest in that company and took up the sale of transformers for the Hornberger Electric Manufacturing Company In 1894, he and his brother-in-law, J. A. Johnson, organized the Kuhlman Electric Company.

He was one of the charter members of The Jovian Order, and has been an active and loyal member of the fraternity from its inception.

Jovian Kuhlman was a thorough optimist, who looked upon the brighter side of life, making him a cheerful companion and a lovable friend.

He is survived by his wife, one daughter and two sons to whom The JOVIAN extends the sympathy and condolences of the fraternity.

* * * *

WILLIAM P. HANCOCK, Po. 8043, superintendent of the generating department of the Edison Electric Illuminating Company of Boston, Mass., died at his home in that city September 19. Jovian Hancock was sixty-one years of age, having been born at Kennebunk, Me., in 1856. He was one of the most widely known power plant executives in the industry and was one of the most valuable officials in the Edison operating systems. His electric work began with the New York Edison Company, and later carried him to many parts of the country. He had been with the Boston Edison Company for twenty-five years. Besides being a loyal member of the Jovian Order, he was affiliated with numerous other societies and organizations, among which were the National Electric Light Association and the Engineers' Club of Boston.

140

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Listed with the Jovian Free Employment Bureau since May.

See page 25 of this issue.

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PRACTICAL LESSONS IN ELECTRICITY

LESSON THIRTY

FIGURING ALTERNATING-CURRENT CIRCUITS

By TERRELL CROFT

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SUSCEPTANCE is the name which has been given to the reciprocal of reactance. Just as the *reactance of a circuit is a measure of the "difficulty"* encountered in forcing an alternating current through the circuit, *susceptance is a measure of the "ease"* with which the current may be forced through the circuit. Reactance is a quantity similar to resistance. Susceptance is one similar to conductance and it is likewise measured in ohms. A circuit having a reactance of 10 ohms has a susceptance of:—1 ÷ 10 = 0.1 ohms. A circuit having a reactance of 0.5 ohms has a susceptance of 1 ÷ 0.5 = 2 ohms.

The net reactance of any circuit is equal to the sum of its permittive reactance and its inductive reactance. Since these two reactances oppose one another the sum must be their algebraic sum. Inductance causes the current to lag behind the impressed e.m.f.; permittance causes the current to lead ahead of the impressed e.m.f., hence if there is more permittive reactance in a

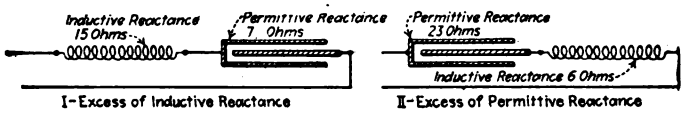
Inductive Reactance 15 Ohms
Permittive Reactance 7 Ohms
Permittive Reactance 23 Ohms
Inductive Reactance 6 Ohms
I-Excess of Inductive Reactance
II-Excess of Permittive Reactance

Fig. 1—Illustrating Addition of Reactances in Series

circuit than inductive reactance the current will lead, and vice versa. It follows that:

(1) $$X = Xl - Xc \qquad (ohms)$$

Where X = the total reactance of the circuit in ohms. Xl = the inductive reactance in the circuit in ohms. Xc = the permittive reactance in the circuit in ohms.

NOTE.—Inductive reactance is usually of most importance in circuits except when the voltages involved are ver high.

EXAMPLE.—The total reactance of the circuit of Fig. 1—*I* = $Xl - Xc = 15 - 7 = 8$ *ohms*.

EXAMPLE.—The reactance of the circuit of Fig. 1—*II* = $Xl - Xc = 6 - 23 = -17$ *ohms*. The minus sign preceding the value 17 indicates that the resultant reactance is permittive, hence will cause the current in the circuit to lead the impressed e.m.f.

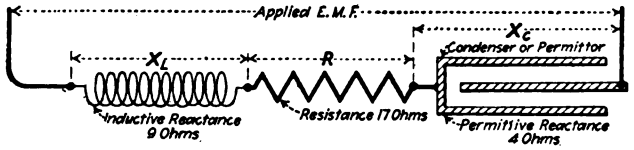

Fig. 2—Inductive Reactance, Permittive Reactance and Resistance in Series

Resonance is that condition which occurs in an alternating-current circuit when the inductive reactance in the circuit is just equal to and hence neutralizes the permittive reactance. Under these conditions the current in the circuit is limited only by the resistance and may therefore attain enormous values. Obviously, resonance occurs when:

(2) $$6.28 \times f \times L = \frac{1}{6.28 \times f \times C}$$

It follows that:

(3) $$L \times C = \frac{1}{(6.28 \times f)^2}$$

or,

(4) $$f = \frac{1}{6.28 \times \sqrt{L \times C}} \qquad (frequency)$$

Obviously, resonance can occur in a given circuit only when an e.m.f. of a certain frequency, f, above, is impressed on the circuit.

EXAMPLE.—If an e.m.f. of such a frequency were impressed across the circuit of Fig. 2 so that the permittive reactance of Xc just equaled the inductive reactance of Xl, then the current through the circuit would be limited only by the resistance R.

Admittance is the name which has been given to the reciprocal of impedance and it is expressed in ohms. The relation between impedance and admittance is similar to that between resistance and conductance. A circuit which has an impedance of 40 ohms,

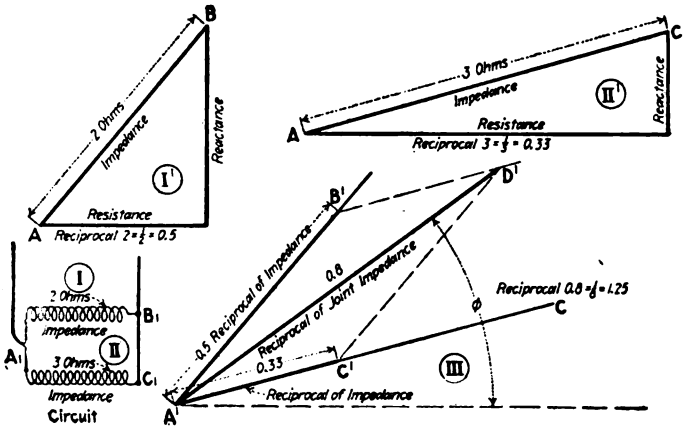

Fig. 3—Graphic Method of Determining Joint Impedance of Two Impedances in Parallel

has an admittance of:—1 ÷ 40 = 1/40 *ohm* = 0.025 *ohm*. A circuit which has an impedance of 0.2 ohms has an admittance of:—1 ÷ 0.2 = 5 *ohms*. In the problem of Fig. 3, which will be discussed later, the admittance of the two impedances in parallel is 0.8 ohm.

The impedance of a circuit containing only resistance and permittive reactance can be readily computed by drawing a vector diagram as shown at Fig. 4—*II*. Although resistance and permittive reactance may be so associated in a circuit that it is impossible to separate them physically, for the purposes of computation it may be assumed that they are separate properties,

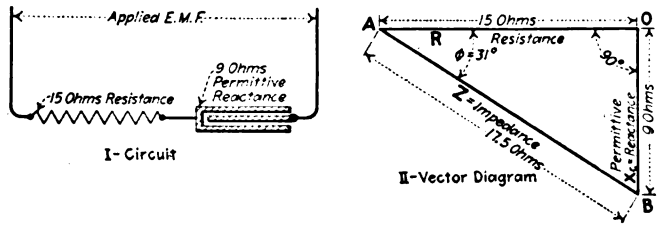

Fig. 4—Indicating Method of Computing Impedance of Resistance and Permittive Reactance

as suggested at *I*. On the basis of the explanation of permittive reactance, it can be shown that:

(5) $$Z = \sqrt{R^2 + Xc^2} \qquad (ohms)$$

EXAMPLE.—To compute the impedance of the circuit of Fig. 4—*I*, the line *OB* is drawn vertically, proportional in length to 9 ohms, to represent the permittive reactance. It is drawn downward to indicate that permittive is the opposite of inductive reactance. Then the line *OA*, to represent the resistance, is laid off at right angles to *OB*. *AB* will then be proportional in length to the impedance of the circuit, which is 17.5 ohms. The angle ϕ, 31 deg. in this case, is the angle by which the current in the circuit will lead the impressed e.m.f.

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The impedance of a circuit containing resistance, inductance and permittance in series may be readily computed. If one piece of apparatus or a circuit contains resistance, inductance and permittance, it can be assumed that each of these is a separate quantity as shown in Fig. 2. The permittive reactance, Xc, is first subtracted from the inductive reactance Xl, which gives the reactance X. Then this reactance is combined with the resistance to obtain impedance, hence:

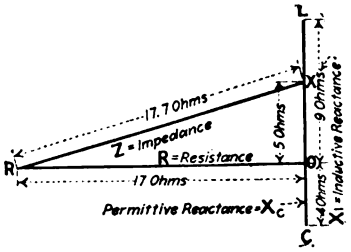

Fig. 5—Solution of Problem of Fig. 2

(3) $$Z = \sqrt{R^2 + (Xl - Xc)^2} \qquad (ohms)$$

or,

(4) $$Z = \sqrt{R^2 + X^2} \qquad (ohms)$$

EXAMPLE.—What is the impedance (Fig. 2) of a piece of apparatus or a circuit which has a resistance of 17 ohms, an inductive reactance of 9 ohms and a permittive reactance of 4 ohms. SOLUTION.—It may be assumed that the reactances and resistances are separate quantities, as shown in Fig. 2. Then the vector diagram, Fig. 5, is constructed. Draw OR 17 units long to represent the resistance. Draw OL 9 units long to represent the inductive reactance. Draw OC vertically downward 4 units long to represent the permittive reactance. The total reactance is the difference between OL and OC, or OX, which is 5 units long. That is $Xl = 5$ ohms. Then RX is drawn and it will be proportional in length to the impedance of the circuit, 17.7 ohms in this case.

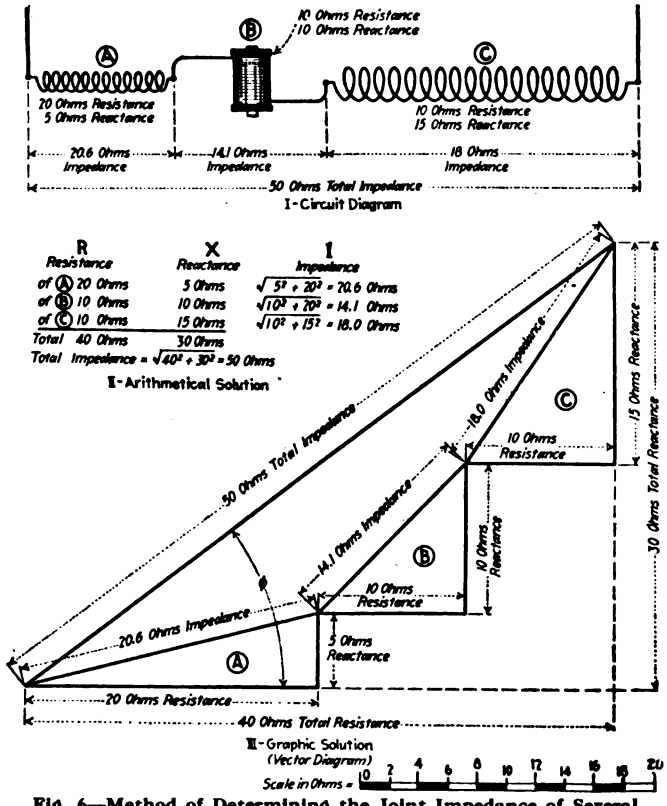
10 Ohms Resistance
10 Ohms Reactance
20 Ohms Resistance
5 Ohms Reactance
10 Ohms Resistance
15 Ohms Reactance
20.6 Ohms Impedance
14.1 Ohms Impedance
18 Ohms Impedance
50 Ohms Total Impedance
I-Circuit Diagram
R Resistance
X Reactance
I Impedance
of A 20 Ohms 5 Ohms √5² + 20² = 20.6 Ohms
of B 10 Ohms 10 Ohms √10² + 10² = 14.1 Ohms
of C 10 Ohms 15 Ohms √10² + 15² = 18.0 Ohms
Total 40 Ohms 30 Ohms
Total Impedance = √40² + 30² = 50 Ohms
I-Arithmetical Solution
50 Ohms Total Impedance
18.0 Ohms Impedance
15 Ohms Reactance
10 Ohms Resistance
14.1 Ohms Impedance
10 Ohms Reactance
30 Ohms Total Reactance
20.6 Ohms Impedance
5 Ohms Reactance
20 Ohms Resistance
40 Ohms Total Resistance
II-Graphic Solution
(Vector Diagram)
Scale in Ohms = 0 2 4 6 8 10 12 14 16 18 20

Fig. 6—Method of Determining the Joint Impedance of Several Impedances in Series

NOTE.—For a circuit containing only resistance and permittance—no inductance—it follows (where $1 \div 6.28 \times f \times C$ = *permittive reactance*) that:—

(6) $$Z = \sqrt{R^2 + \left(\frac{1}{6.28 \times f \times C}\right)^2}$$

For a circuit containing resistance, inductance and permittance:—

(7) $$Z = \sqrt{R^2 + \left[(6.28 \times f \times L) - \left(\frac{1}{6.28 \times f \times C}\right)\right]^2}$$

The joint impedance of several impedances in series can be computed either graphically or arithmetically as shown in Fig. 6. It is necessary to know the resistance and reactance of each component to obtain their joint impedance because the arithmetical sum of the individual impedances of the components is not necessarily equal to their joint impedance. The angle ϕ is the angle of lag of the circuit—the angle by which the current will lag behind the impressed e.m.f. The cosine of this angle is the power factor of the circuit.

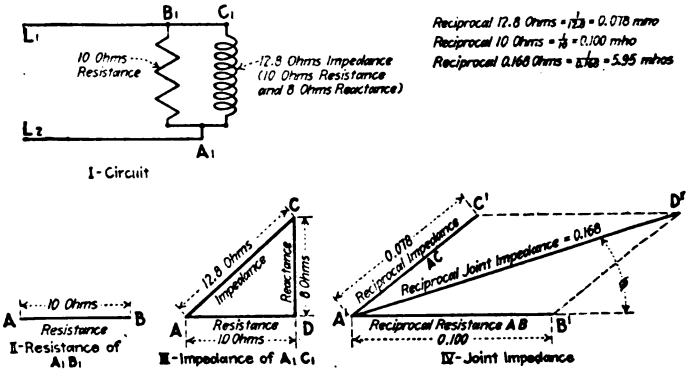

Fig. 7—Graphic Method of Computing the Joint Impedance of Resistance and Impedance in Parallel

The method of computing the joint impedance of a resistance and an impedance in parallel is illustrated in Fig. 7. The resistance A^1B^1 shown at I is 10 ohms; the impedance A^1C^1 is 12.8 ohms. The impedance of 12.8 ohms was computed graphically as shown at III. The line A^1B^1 (IV) is drawn horizontally, and in length proportional (to any convenient scale) to the reciprocal—conductance—of the resistance. Now A^1C^1 is drawn parallel to AC and proportional (to the same scale as that used for A^1B^1) to the reciprocal of the impedance AC. That is, A^1C^1 represents the admittance of A_1C_1. The resultant A^1D^1 will be proportional in length to the joint admittance of A_1B_1 and A_1C_1 in parallel. That is, A^1D^1 will be proportional to the reciprocal of the joint impedance.

To obtain the joint impedance, compute the reciprocal of the value represented by A^1D^1 which, in the example illustrated is:—$1 \div 0.168 = 5.95$. Hence, the joint impedance of A_1B_1 and A_1C_1 is 5.95 ohms. The angle ϕ in III is the angle by which a current in the circuit L_1L_2 would lag behind the impressed e.m.f.

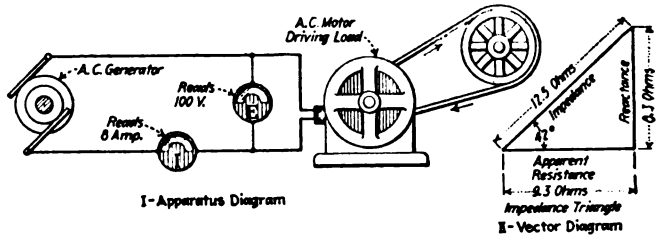

Fig. 8—Illustrating Impedance of Motor

To compute the joint impedance of two impedances in parallel, the method delineated in Fig. 3 may be used. First draw, to some convenient scale, the impedance triangles I^1 and II^1 for impedances I and II. Then, draw A^1B^1, parallel to AB, proportional (to any scale) to the reciprocal of the impedance A_1B_1, and draw A^1C^1 parallel to AC proportional (to the same scale) to the reciprocal of the impedance A_1C_1. The resultant A^1D^1 will be proportional to the *reciprocal* (admittance) of the joint admittance of A_1B_1 and A_1C_1. To obtain the joint impedance, compute the reciprocal of the value represented by A^1D^1 which in the example shown is:—$1 \div 0.8 = 1.25$. Therefore, the joint impedance of the two impedances is 1.25 ohms. The angle ϕ is the angle by

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which the current in leads A_1 and B_1 lags behind the e.m.f. impressed by the generator.

Impedance of motors and transformers and energy resistance are phenomena which should be understood. In a direct-current circuit which does not contain a motor or other source of counter e.m.f., the current (by Ohm's law) always equals the impressed e.m.f. divided by the resistance of the circuit. In alternating-current circuits, as has been shown, this relation seldom exists because the current in such circuits is limited not only by the resistance of the circuit but also by a counter e.m.f. of self-induction. In an alternating-current circuit with which no iron (transformers or motors) is associated, the current with a given impressed e.m.f. is determined by the impedance of the circuit conductors. That is, the current is determined by the sum of the resistance and reactance.

However, in circuits in which are included transformers, motors or other devices which convert electrical energy, the energy imparted to the circuit is obviously expended in other ways than by merely overcoming resistance. In such circuits the current is not equal to the *impressed e.m.f.* ÷ (*resistance* + *reactance*). The e.m.f. impressed on a motor or transformer may be considered as comprising two components:—(1) *an induction component* which overcomes the counter e.m.f. of self-induction of the circuit. (2) *An energy component* which does actual work in making the motor or transformer deliver energy and in forcing current through the resistance of their windings.

EXAMPLE.—Consider a motor (Fig. 8) which is driving a load. (Conditions similar to those to be described would obtain for a loaded transformer.) If the e.m.f. (100 *volts*) impressed on the motor be divided by the current at some certain load, the result will be the apparent impedance, in ohms, of the motor at that load. Assume 100 volts impressed and a current of 8 amp. Then the apparent impedance of the motor will be:—100 ÷ 8 = 12.5 *ohms*. Assume the angle of lag of the current to be 42 deg. (power factor = 74 per cent) and draw the impedance triangle as indicated at *II*. The resistance of the motor from this triangle would appear to be 9.3 ohms. Actually, the resistance of such a motor would be less than 2 ohms. Hence, the balance of this apparent resistance of 9.3 ohms or at least 7.3 ohms would represent not resistance but actual work being done by the motor in pulling the load.

This apparent resistance (9.3 ohms) representing partly real resistance and partly the doing of work may be called *energy resistance*. Hence, in simple circuits without iron, such as overhead line and interior-wiring circuits, the components of the impedance of the circuit consist only of reactance and resistance. But if transformers or other devices containing iron are introduced, then the apparent impedance is composed of reactance and energy resistance.

NOTE.—Impedance of isolated circuits without iron, like overhead lines, is practically the same for all current strengths—but in circuits with iron, impedance may vary with the current. Voltage drop in an electrical energy transmission circuit cannot be correctly estimated on the basis of the line impedance alone since the drop may not correspond in phase with the total impedance of the circuit.

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Dues of Enlisted Jovians Remitted

ALL JOVIANS who enlist in the Military Service of the United States or any of the allies of our country will have their dues in the Jovian Order cancelled and will be carried on an honor roll during such enlistment. Their cards, magazines and other Jovian material will be forwarded to them at the front or elsewhere whenever possible. Jovians should advise the Central Offices of the Order, of their enlistment.

THE JOVIAN ORDER
Syndicate Trust Building : : : SAINT LOUIS

COMMERCIAL CONDITIONS AFFECTED BY WAR

EXPORTS of manufactured goods have increased over seventy-eight per cent since the beginning of the war. In 1914 exports of goods ready for consumption by American manufacturers amounted to $724,908,000. This was 31 per cent of all exports. Exports of manufactured goods in 1917 (fiscal year ending June 30), amounted to $2,943,923,212, which was 47 per cent of the total exports.

Of the latter amount, $1,129,341,616 was iron and steel products, against $251,480,677, in 1914.

However, all lines of manufactured goods show an increase with the exception of agricultural implements, naval stores and wood products.

The comparative figures of electrical machinery, appliances, etc., are: 1914, $25,060,844; 1916, $52,158,773; an increase of slightly over 108 per cent.

* * * *

The new naval wireless plant at Honolulu was put into service September 29, and is the most powerful Radio plant in the world. The first message was transmitted to Secretary of the Navy Daniels, at Washington. It was received at the Sayville Station, on Long Island; the distance traversed being approximately 5,000 miles.

* * * *

The Post Office Department announces that Christmas packages for United States soldiers in France must be in the mails by November 15, to insure their delivery on Christmas morning.

* * * *

The law enacted by Congress to define, regulate and punish trading with the enemy, carries a maximum fine of $10,000 and imprisonment for ten years, for each violation of its provisions.

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CLASSIFICATION	No. on File	Age	Qualifications	Experience	Salary Wanted	Location
Bookkeepers	2	26–31	High School	5–14 yrs.	$65–100	Anywhere.
Central Station Engineers	5	29–45	H. S.-Univ.	6–18 yrs.	$60–200	Anywhere.
Clerical	7	22–47	High School	2–10 yrs.	$65–125	Anywhere.
Commercial Laboratory Workers	1	29	Tech. School	11 yrs.	.....	Anywhere.
Construction Engineers	8	21–39	H. S.-Univ.	4–20 yrs.	$50–200	Anywhere.
Consulting Engineers	2	27	Tech. Grad	8 yrs.	.....	Anywhere.
Draftsmen	2	25–31	Tech. School	5–18 yrs.	$80–150	Anywhere.
Electricians	6	20–35	H. S.-Univ.	3–12 yrs.	$60–100	Anywhere.
Electrical Engineers	18	22–45	Practical-Univ.	5–20 yrs.	$65–300	Anywhere.
Engineers	8	23–31	Practical-Univ.	5–12 yrs.	$120–160	Anywhere.
Estimators	2	26–34	Practical	9–18 yrs.	$90–125	Anywhere.
Fixture Men	2	26–28	Practical	10 yrs.	$140	Anywhere.
Foremen	4	27–31	Practical	7–14 yrs.	$125–160	Anywhere.
General Managers	4	30–34	Practical	7–15 yrs.	$250–417	Anywhere.
Illuminating Engineers	2	26–31	Univ	5–7 yrs.	$100–200	Anywhere.
Linemen	2	24–28	High School	4–9 yrs.	$90	Anywhere.
Maintenance Men	1	26	High School	6 yrs.	.....	Anywhere.
Managers, Commercial Department	1	37	Practical	12 yrs.	$200	Anywhere.
Managers, Contracting	1	26	College	5 yrs.	$125	Anywhere.
Managers, Jobbing House	1	32	College	13 yrs.	$10,000	Anywhere.
Managers, Office	1	32	High School	10 yrs.	$200	Anywhere.
Managers, Plant	19	25–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere.
Managers, Store	1	29	Univ.	10 yrs.	$125	West.
Managers, Railway	1	39	Practical	4 yrs.	$300	Anywhere.
Managers, Traffic	1	37	Practical	15 yrs.	$250	Anywhere.
Manufacturers Representatives	14	30–46	Practical-Tech.	9–20 yrs.	Com.–$300	Anywhere.
Mechanical Engineers	1	40	Univ.	.....	$200	St. Louis.
Meter Testers	2	28–34	Grade-College	8–16 yrs.	$100	Anywhere.
New Business Managers	4	29–34	H. S.-Univ.	9–15 yrs.	$100–200	Anywhere.
Office Executives	8	25–40	Grade-Univ.	4–18 yrs.	$80–200	Anywhere.
Purchasing Agent	10	24–41	Grade-Tech.	4–21 yrs.	$80–200	Anywhere.
Sales Engineers	11	25–41	College-Univ.	4–11 yrs.	$100–200	Anywhere.
Sales Managers	12	28–45	H. S.-Univ.	4–17 yrs.	$150–417	Anywhere.
Salesmen	74	22–55	H. S.-Univ.	2–25 yrs.	$75–200	Anywhere.
Store Keepers	1	33	Practical	10 yrs.	$150	Anywhere.
Superintendents	25	26–46	H. S.-Univ.	3–15 yrs.	$100–500	Anywhere.
Supervisors Lighting	1	25	Technical	7 yrs.	$100	East.
Telephone Engineers	2	24–28	H. S.-Tech.	5–7 yrs.	.....	Anywhere.
Testing Engineers	1	24	Technical	2 yrs.	$100	Anywhere.
Wiremen	2	23–30	High School	7–17 yrs.	$75–125	Anywhere.

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JOVIANS!

Can You Use Any of These Jobs?

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, are seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau. A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of any of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

90. Winders. Ohio manufacturing concern wants men for armature, motor and field-coil work.

91. Power Apparatus Salesman. High grade man needed for larger cities of Middle West; salary commensurate with results.

92. Lamp Salesmen. Positions for men of initiative and energy in Pittsburgh, Columbus and Atlanta territory; $100 to $175 per month.

93. Salesmen. Two worth-while men needed by New Orleans house, to sell electrical supplies and auto accessories to city and country trade.

94. Clerk. Southern jobbing house want young man for correspondence and office detail work.

95. Order Clerk. Young man familiar with materials for interior wiring and their prices, wanted by New York contracting concern.

96. Estimator. Opening with New York contractor, for young man familiar with plans, specifications and material for interior wiring.

97. Manager Retail Department. Buffalo electric house is looking for young department head who can also handle advertising and is familiar with promotion of sales.

98. Salesman. Chicago electrical house wants man (one with technical experience preferred) living in the territory, to cover Michigan, Northern Wisconsin and Minnesota, to introduce specialty lines of well known manufacturer and jobber.

99. Illuminating Engineer. Chicago concern has attractive opening for right man.

100. Purchasing Agent. Man with ability can secure good place with Chicago electrical concern.

101. Lineman. $80 to $85 per month to competent men offered by Southwest Missouri public service corporation.

102. Fixture Salesman and Estimator. Man combining these two essentials wanted by Cincinnati house, to call on home builders and solicit orders for lighting fixtures.

103. Fixture Salesman. New Orleans house has place open for the right man.

104. Sales Engineer. Man familiar with Westinghouse apparatus wanted to take charge of Buffalo office of electrical supply house, in sales capacity.

105-6. Wiremen and Electricians. Illinois public service concern will pay $75 per month for men.

107. Bookkeeper. Attractive opening with Milwaukee house. $100 or more to young man with good business experience.

108. Assistant Sales Manager. New York house offers good opportunity to hustler, acquainted with supply line and office details.

109. Manager. Man, familiar with mechanical end of electric motor plant, to take charge of department for Ohio manufacturing concern; $125 per month.

110. Plant Operator. Texas light and power company will pay $90 per month for the right man.

111. Electrical Engineer. Highly trained technical man wanted by large eastern manufacturer; salary liberal as soon as ability demonstrated. More complete particulars on application.

112. Clerk-Stenographer. Combination man wanted for United States Reclamation Service; $82.50 per month to start.

113. Sales Engineer. Large New York jobber wants suitable man with college education.

114. Dynamo Tenders. Ohio public service concern wants several men.

116. Draftsman. Opening with Arkansas lighting company.

117. Clerk. Opportunity for young man to work into position as salesman in Middle West.

118. Switch Board Erectors and Transformer Men. Ohio public service corporation wants five capable men.

119. Salesmen. Men acquainted with motor trade needed by New Orleans electrical supply house.

120. Salesmen. Chicago house has opening for man who has had experience with electric specialty and flashlight lines.

121. Salesmen. Electric stove manufacturer has opening for several experienced men.

122. Electricians. Two all around men wanted by Indiana public service concern.

123. Electric Engineer. Detroit manufacturer has attractive opening for young man having technical training, especially in mathematics.

124. Fuse Salesman. Large Middle West manufacturer has place for two men, one each in East and West; Commission with drawing account.

125. Meter Man. Forty cents an hour for eight-hour day, with overtime, paid by Texas public service concern.

126. Wiremen. Ohio contractor is in need of several competent men.

127. Electrician. All round machine shop repair man wanted in Ohio.

128. Chandelier Salesman. Oklahoma fixture house will pay $25 per week for capable man.

129. Electrician. Combined house-wiring and line-work man wanted by Missouri public service concern.

130. Mechanical Superintendent. $175 per month opening with reclamation service in North Dakota for man competent to take charge of steam generating station, supplying power for nearby city, also for irrigation purposes. Married man preferred; five-room cottage available at $12 per month; school facilities; should be on ground by October 15; to take charge November 1

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WHAT THE RAILROAD WAR BOARD HAS DONE TO INCREASE THE CAPACITY OF THE RAILROADS

SOME of the things accomplished as set forth by the American Railway Association, Special Committee on National Defense: The board began operations April 21.

On April 30, the so called car shortage of the country amounted to 148,627 cars; on June 30, the shortage had been cut to 77,144 cars and on August 1, the excess of unfilled car requisitions over idle cars amounted to 33,776.

In the month of May freight transportation service rendered by 75 per cent of the roads was increased 16.1 per cent over the same period in 1916.

Approximately 20,000,000 miles of train service a year has been saved by the elimination of all passenger trains not essential to pressing needs, releasing the equipment and men for freight service.

Freight congestion at many important points has been averted by promptly moving cars from one railroad to another irrespective of ownership. By the adoption of this policy (which is new to American railroad usage), 113,420 cars have been moved to points where they were most needed.

Through the pooling of lake coal and lake ore 52,000 cars less were required to transport those commodities.

Pooling tidewater coal has released 133,000 cars for other service.

Despite the fact of an abnormal increase in exports of wheat, corn, barley and oats to the allies, less cars were used in their transportation.

Increasing car loading has been a means used to decrease the car shortage.

Checks made show that 200 barrels of potatoes are being placed in cars formerly loaded with 125 barrels; cement cars now carrying 77,000 pounds as against 70,000; 6.6 per cent more tin plate is being loaded in each car; 61,923 pounds of flour against previous loading of 40,000 pounds.

These illustrations readily show the wonderful results made possible by the voluntary mobilization of the railroads and how the roads are co-operating with the Railroad War Board to render the most efficient service to the nation.

* * * *

Indian Names on Petition to President

One of the most interesting list of Indian names that has ever come to official notice at Washington are those signed to a petition directed to the president, congress and the commissioner of Indian affairs protesting against the opening of the Crow Indian reservation for settlement by the whites. The petition states that it is understood that certain white men in the towns of Hardin and Billings, Mont., Sheridan, Wyo., and other places adjacent to the Crow Indian reservation are making an effort to have the reservation thrown open for settlement.

Among the strange, though characteristic names attached to the petition (most of which are signed by "his thumb mark"), are the following: "Goes Together, Covers His Face, Does Everything, Eagle Turns, Fights Wellknown, Holds Enemy, White Man Runs Him, Two Leggins, Crooked Arm, Joe Child In Mouth, Elmer Takes Wrinkle, Iron Fork, Looks At Ground, Comes Up Red, Stops, Top of Moccasin, Don't Mix, Scolds Bear, Bull Don't Fall Down, Bear In The Middle, Bird Hat, Long Bear, James Buffalo, Medicine Crow, Young Swallow, Dominec Old Elk, Austin Stray Calf, Old Coyote, Young Yellow Wolf, Joseph Spotted Rabbit, Thomas Tobacco, George White Bear, White Dog, Pretty Horse, Old Rabbit, Eric Bird Above, Philip Iron Head, Plenty Buffalo, Walks With Wolf, Lots of Stars, Eli Black Hawk, Knows the Ground, No Horse, Flat Dog, Coyote Runs, Snapping Dog, John Sit Down Spotted, Looks With Ears, Three Foretops, Barney Looks Back, Shot in Hand and Holds Up."

HOW TO BUY LIBERTY BONDS

Q. How much do bonds of the second liberty loan cost?

A. From $50 to $100,000, whatever their face value calls for. The law states that these bonds must be sold at not less than "par;" that is, their face value—100 cents on the dollar.

Q. How can I buy the bonds of the second liberty loan?

A. By filling out an application blank and handing it to any bank or trust company, bond dealer or broker, or to one of the Federal reserve banks, or to the Treasury Department at Washington.

Q. When can this application for bonds be made?

A. At any time from the first day of October to the close of business on the 27th day of October, 1917.

Q. In what form must applications to buy a liberty bond be made?

A. All applications must be in the form prescribed by the Secretary of the Treasury, obtainable at any bank or from a liberty loan committee.

Q. Must the full price of bonds be paid on application?

A. No; only 2 per cent of the amount you want to buy is required when application is made.

Q. When must the remainder be paid?

A. In installments as follows: 18 per cent on November 15, 1917; 40 per cent on December 15, 1917; and 40 per cent on January 15, 1918.

Q. Can I buy a bond on the installment plan by paying for it weekly or monthly?

A. The Treasury Department will not accept payments in this manner, but many banks and a great many employers will sell you a bond and allow you to pay for it in partial payments. If you desire to pay for your bonds in this way, consult your employer or any banker.

Q. When will the subscribers know how many bonds they will receive on their subscriptions?

A. The Secretary of the Treasury will announce this about the 6th of November, 1917. This is known as making the "allotment."

Q. Must all subscribers to liberty bonds wait until the allotment is made to know whether or not they will receive their bonds?

A. No; a subscriber for bonds up to $1,000 is certain to receive his bonds.

Q. If I desire to pay for the bonds at the time I make my subscription, may I do so?

A. Yes; you can pay in full for any bonds you buy up to and including $1,000; but subscribers for more than this amount must wait until the allotment is made.—Official Bulletin.

* * * *

THE HOUR GLASS

A LITTLE THOUGHT SHOULD CONVINCE ANY MEMBER THAT THE JOVIAN ORDER HAS MADE THE BEST INVESTMENT OF ITS SERVICES POSSIBLE FOR THE BENEFIT OF ITS ENTIRE MEMBERSHIP BY APPLYING ITS EFFORTS TO REDUCE THE COST OF INSURANCE. WHY? THE SAVING TO MEMBERS WILL AMOUNT TO THREE TIMES THE TOTAL OF ALL DUES PAID INTO THE ORDER. FOR ILLUSTRATION: IF TEN THOUSAND MEMBERS TAKE ADVANTAGE OF THE INSURANCE THE ORDER PROVIDES, IT WILL MEAN A MINIMUM SAVING OF $120,000, ON $40,000 DUES PAID INTO THE ORDER. HOW CAN YOU BEAT IT?

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STATESMEN-AT-LARGE

ALEXANDER, H. W., Po. 17191, 29 West 39th St.....New York, N. Y.
BINFORD, JULIAN, Po. 1174V, care Westinghouse Lamp Co.....Atlanta, Ga.
BISCHOFF, W. E., Po. 3190, care W. N. Matthews & Bro.....Chicago, Ill.
CHASE, SAMUEL A. Po. 4424, care Westinghouse Elec. & Mfg. Co...E. Pittsburgh, Pa.
COLKITT, J. N., Po. 2627, care John A. Roeblings Sons Co.....Los Angeles, Cal.
CROWFOOT, C. M., Po. 1182, care Crouse-Hinds Co.....Cincinnati, Ohio
CROW, GALEN, Po. 925V, care Public Service Co. of Oklahoma.....Guthrie, Okla.
DOWNS, B. M., Po. 2508, care Hemingray Glass Co.....Covington, Ky.
DUNHAM, A. W., Po. 7352, care Sun Ray Manufacturing Co.....Oshkosh, Wis.
FOSTER, F. C., Po. 3398, 823 Illuminating Building.....Cleveland, Ohio
GUARDIA, A. A., Po. 2657, 4447 Magnolia Ave.....Chicago, Ill.
HERSTEIN, W. R., Po. 765V, care Electric Supply Co.....Memphis, Tenn.
HILL, G. W., Po. 1271, 29 West 39th St.....New York, N. Y.
HICKOX, NORMAN B., Po. 7881, care National X-Ray Reflector Co., 235 West Jackson Blvd.....Chicago, Ill.
JOHNSON, FRED, Po. 177V, 1110 Federal Reserve Bldg.....St. Louis, Mo.
LAUDERBACH, F. E., Po. 11655, 917 Pine St.....St. Louis, Mo.
MONTGOMERY, R., Po. 6147, care Louisville Gas & Electric Co.....Louisville, Ky.
RAMIER, J. F., Po. 10604, care Memphis Cons. Gas & Electric Co..Memphis, Tenn.
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville, Ky.
RIPLEY, L. O., Po. 7042V, care Kansas Gas & Electric Co.....Wichita, Kan.
SERVA, A. A., Po. 425, 2420 Hoagland Ave.....Ft. Wayne, Ind.
VIOT, H. F., Po. 2156, 1810 Farnam St.....Omaha, Neb.
VOGAN, W. G., Po. 15974, care Northern Electric Co.....Winnipeg, Man.
VOGEL, J. C., Po. 2254-32V, 59th and Woodland Ave.....Philadelphia, Pa.
WADDINGTON, E. H., Po. 5176, care Western Electric Co.....St. Louis, Mo.
WAKEMAN, J. M., Po. 524, 29W 39th St.....New York, N. Y.

JOVIAN STATESMEN

ALABAMA

MATTHEWS, H. W., Po. 4476, care Burgoon-Matthews Electric Co.....Birmingham

ARKANSAS

COUCH, H. C., Po. 13893, care Arkansas Power Co.....Arkadelphia

CALIFORNIA

ORRICK, MURRAY S., Po. 5886, care Western Electric Co.....San Francisco

CONNECTICUT

HOLMES, T. L., Po. 3046, care Western Electric Co.....West Haven

GEORGIA

COLLIER, RAWSON, Po. 4458, care Georgia Railway & Power Co.....Atlanta

IDAHO

KIERSTED, EARNEST C., Po. 10258, care Idaho Power Co.....Twin Falls

ILLINOIS

CORBY, J. S., Po. 755V, care Bryan-Marsh Electric Works, General Electric Co.....Chicago

INDIANA

OBLINGER, R. P., Po. 4851, care Indianapolis Electric Supply Co.....Indianapolis

KENTUCKY

TAFEL, PAUL, Po. 13337, care H. C. Tafel Electric Co.....Louisville

LOUISIANA

CLEMENT, W. E., Po. 2557, care New Orleans Railway & Light Co.....New Orleans

MASSACHUSETTS

TROY, M. O., Po. 3271-37, care General Electric Co.....Schenectady, N. Y.

MICHIGAN

CAVANAUGH, J. A., Po. 11199, care Benton Harbor & St. Joe Ry. Co...Benton Harbor

MINNESOTA NORTH AND SOUTH DAKOTA

ROPELTY, O. A., Po. 7839V, care General Electric Co.....Minneapolis

MISSISSIPPI

GORENFLO, W. F., Po. 3342, P. O. Box 28.....Gulfport

MISSOURI

DENTON, A. P., Po. 1415V, care Denton Engineering & Construction Co.....Kansas City

NEBRASKA

ZIMMAN, I. B., Po. 1411, care Omaha Electric Light & Power Co.....Omaha

NEW HAMPSHIRE

BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston, Mass.

NEW JERSEY

HEIDRICH, HERMAN C., Po. 14439, care Electric Repair & Motor Co.....Newark

NEW YORK

CLELAND, H. E., Po. 18656, care Electrical World.....New York City

OHIO

WILSON, A. M., Po. 14357V, care University of Cincinnati.....Cincinnati

OKLAHOMA

MUSSON, H. E., Po. 7899V, care Smith & Swan, 617 West Main St .....Henriette

OREGON

MOODY, A. S., Po. 4576, care Pacific States Electric Co.....Portland

PENNSYLVANIA

PEIRCE, C. L., Po. 3252, care Hubbard & Co.....Pittsburgh

RHODE ISLAND

DAVENPORT, E. R., Po. 8019, care Narragansett Electric Light Co....Providence

SOUTH CAROLINA

FULLER, W. W. Po. 16462, care Isle of Palms Traction Co.....Charleston

TENNESSEE

FLOURNOY, FRANK, Po. 14793, care Cumberland Telegraph & Telephone Co.....Memphis

TEXAS

PHIPPS, W. R., Po. 10676, care Brush Electric Light Co.....Galveston

UTAH

BRANDENBURGER, LEO, Po. 4755, care O. H. Davidson Equipment Co.....Salt Lake City

VERMONT

LARABEE, E. E. Po. 1145, care Twin States Gas & Electric Co.....Bennington

VIRGINIA

SEILER, GUY E., Po. 7479, care Virginia Railway & Power Co.....Richmond

WEST VIRGINIA

POWERS, W. R., Po. 2784, care Consolidated Heat, Light & Power Co..Huntington

WISCONSIN

CRABTREE, WALTER B., Po. 6155, care Globe Electric Co.....Milwaukee

PROVINCE OF ALBERTA

RICHARDS, NORMAN S., Po. 8985, care Northern Electric Co.....Calgary

PROVINCE OF MANITOBA

SCHUMACHER, J. H., Po. 4742, Schumacher-Gray Co., Ltd.....Winnipeg

PROVINCE OF QUEBEC

HYDE, E. N., Po. 1614, care Northern Electric & Manufacturing Co., Ltd..Montreal

FIRST AND SECOND TRIBUNES

ALABAMA

MATTHEWS, H. W., Po. 4476, First Tribune, care Burgoon-Matthews Electric Co.....Birmingham

ARKANSAS

DREES, C. J., Po. 1572, First Tribune, care Arkansas Electric Co.....Little Rock
RUSH, J. C., Po. 1556V, First Tribune, care Rush Bros.....Hot Springs

CALIFORNIA

*BROCKWAY, A. E., Po. 6039, First Tribune, care Latourrette Fiscal Co., 3431 Sacramento Ave.....Sacramento
(*J. O. Tobey, Po. 12226, Second Tribune)
*FISHER, R. E., Po. 7389, First Tribune, care Pacific Gas & Electric Co. San Francisco
(*W. L. Neelands, Po. 9395, Second Tribune)
*GOULD, T. A., Po. 18057, First Tribune, care Redondo Home Telephone Co.....Redondo Beach
KLAUBER, L. M., Po. 14635, First Tribune, care San Diego Consolidated Gas & Electric Co.....San Diego
(R. C. Cavell, Po. 14627, Second Tribune)
*MURPHY, W. A., Po. 12220, First Tribune, Stockton Hotel Annex.....Stockton
(*L. F. Goudall, Po. 12216, Second Tribune)
*SESSIONS, H. N., Po. 14256, First Tribune, care Southern California Edison Co., 120 East Fourth St.....Los Angeles
*K. E. Van Kuran, Po. 7062, Second Tribune)
(*Henry Mellman, Po. 9392, Second Tribune).....Oakland

COLORADO

*PAUL, CLARENCE M., Po. 4942, First Tribune, care Trinidad Gas & Electric Supply Co.....Trinidad
*Harry L. Woolfenden, Po. 1062V, Second Tribune)

DISTRICT OF COLUMBIA

CARROLL, HARRY R., Po. 1794, First Tribune, 514 Twelfth St., N. W..Washington

GEORGIA

*BYCK, SYLVAN M., Po. 7437, First Tribune, care Byck Electric Supply Co. Waycross
(Geo. E. Watts, Po. 12482, Second Tribune).....Atlanta
*FLANIGAN, C. D., Po. 4708, First Tribune, care Athens Railway & Electric Co.....Athens

IDAHO

MCKELVEY. G. E., Po. 9704, First Tribune, care Electric Investment Co....Boise
*BROWN, C. O., Po. 17281, First Tribune care Mountain States Tel. & Tel. Company.....Idaho Falls
*DOVERY, C. G., Po. 10241, First Tribune, Idaho Power Co.....Twin Falls
(*J. O. Blackstone, Po. 15318, Second Tribune)

ILLINOIS

*BAUM, B. E., Po. 19260, First Tribune, care Vermillion County Telephone Co.....Danville
*BROWN, EDWIN C., Po. 5278, First Tribune, care Galva Electric Light Co..Galva

ILLINOIS—Continued

*GREEN WM. A., Po. 13279, care Green Electric Co., 315 South Jefferson St...Peoria
(*Jas. R. Downs, Po. 13277, Second Tribune)
*KETTRON, C. W., Po. 16416, First Tribune, President, Illinois Elect. Porc. Co.....Macomb
LANPHIER, R. C., Po. 3236, care Sangamo Electric Co.....Springfield
(James R. Massey, Po. 8930, Second Tribune)
MORSE, CHESTER A., Po. 14611, First Tribune, care Central Public Illinois Service Co.....Mattoon
(Donald R. Truax, Po. 14617, Second Tribune)
*MOTT, H. A., Po. 17507, First Tribune, care Chicago Telephone Co., 212 W. Washington St.....Chicago
(*A. L. Nelson, Po. 15384, Second Tribune)
WESSEL, O. E., Po. 9814, First Tribune, care East St. Louis Light & Power Co.....East St. Louis
(Chas. E. Broderick, Po. 1154, Second Tribune)
YONTS, CHAS. B., Po. 11040, First Tribune, care Northern Illinois Utilities Co.....Dixon

INDIANA

*BOOHER, O. M., Po. 12493, First Tribune, Manager, Commercial Department, Indiana Railways & Light Co.....Kokomo
HARRIS, A. B., Po. 14154, First Tribune, 570 Washington St.....Gary
*LEE, WALLACE O., Po. 11440, First Tribune, Indianapolis Light, Heat & Power Co.....Indianapolis
*KLINE, J. J. Po. 6165, First Tribune, care Fort Wayne Wor ks, General Electric Co.....Fort Wayne
(*Jas. I. Toy, Po. 14768, Second Tribune)
NIGHT, CHAS. H., Po. 4828, First Tribune, care Indiana & Michigan Electric Co.....South Bend

IOWA

*FLACK, FRANK W., Po. 13979, First Tribune, care Iowa Ry. & Light Co..Coon Rapids
KING, R. H., Po. 3984, First Tribune, care King Plumbing Co.....Keokuk
*LOVEGROVE, N. W., Po. 5638, First Tribune, care Herring Motor Co. Des Moines
MCINNERNEY, B., Po. 1400, First Tribune, care Kimball Bros. & Co..Council Bluffs
(E. S. Damon, Po. 1398, Second Tribune)
MURPHY, J. E., Po. 15800, First Tribune, care Murphy-Dunham Co..Sioux City

KANSAS

*CAMP, ROBERT N., Po. 16505, First Tribune, 108½ East Ash St.....Salina
(J. E. French, Po. 15811 Second Tribune)
CATES, WILLIAM C., Po. 17862, First Tribune, care Cates Electric Co...Hutchinson
*HARVEY, J. L., Po. 6546, First Tribune, care General Electric Co., 945 Emporia St.....Wichita
(*Charles A. Stanley, Po. 9690, Second Tribune)
(J. E. French, Po. 15811, Second Tribune)
*HUBBARD, HARVEY B., Po. 17623, First Tribune, care Hubbard Electric Co. Beloit
*MAGRUDER, H. W., Po. 15816, First Tribune, care Liberal Light, Ice & Power Co.....Liberal
*MURPHY, JAS. R., Po. 15817, First Tribune, care Great Bend Water & Electric Light Co.....Great Bend

(*These First and Second Tribunes appointed by Reigning Jupiter. All Statesmen-at-Large and Statesmen in this list were appointed or elected to serve during this administration.)

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KENTUCKY

*ADAMS, F. C., Po. 18315, First Tribune, proprietor, Adams Electric Co...Sulphur
*BERRY, D. EARLE, Po. 8245, First Tribune, care Ruby House .....Owensboro
HANNAH, W. M., JR., Po. 13652, First Tribune, care Genera lElectric Co..Lexington
MONTGOMERY, ROBERT, Po. 6147, First Tribune, care Louisville Gas & Electric Co.....Louisville
C. C. Childers, Po. 15494, Second Tribune)

LOUISIANA

*AICKLEN, WM. J., JR., Po. 5666, First Tribune, care Consumers Electric Light & Power Co.....New Orleans
(*W. A. Porteous, Po. 9226, Second Tribune)
*CAMERON, HENRY F., Po. 2556, First Tribune, care Lake Charles Railway, Light & Waterworks Co.....Lake Charles
JOUBERT, W. C., Po. 16467, First Tribune, 409 Man St.....Baton Rouge
*MCCONNELL, JOHN J., Po. 17031, First Tribune, care Rayville Light Plant.Rayville
WILLIAMS, J. A., Po. 5053, First Tribune, care Southwest Gas & Electric Co.....Shreveport
(H. E. Cahn, Po. 13025, Second Tribune)

MARYLAND

(Stanley B. Prather, Po. 1650, Second Tribune).....Baltimore

MASSACHUSETTS

*DERRY, H. W., Po. 8022, First Tribune, care Pittsfield Electric Co.....Pittsfield
(*T. G. Crawford, Po. 7930, Second Tribune)
LAVIN, LEO J., Po. 15143, First Tribune, 95 Pleasant St.....Worcester
*(Kurt R. Sternberg, Po. 7612, Second Tribune).....Springfield

MICHIGAN

*AVIS, CLYDE J., Po. 10086, First Tribune, Treasurer, Southern Michigan Light & Power Co.....Morenci
(*Samuel Ball, Po. 19542, Second Tribune).....Bay City
*BRUSH, NORMAN O., Po. 11198, First Tribune, care Capital Electric Co...Lansing
(*Guy G. Crane, Po. 13059, Second Tribune)
COTTON, GEORGE, Po. 10089, First Tribune, 821 Lyon St.....Grand Rapids
(Carl Johnston, Po. 12841, Second Tribune)
*COURVILLE, H. W., Po. 13954, First Tribune, care Commonwealth Power Co.Jackson
(*L. C. Tefft, Po. 14209, Second Tribune)
*CURTIS, ROBT. E., Po. 19050, First Tribune, care Benton Harbor & St. Joe Railway & Lt. Co.....Benton Harbor
(Carl A. Burchards, Po. 19049, Second Tribune)
KLOSE, LEROY, Po. 13959, First Tribune, care L. R. Klose Electric Co..Kalamazoo
(Harry D. Georgia, Po. 16324, Second Tribune)
DUQUETTE, EDWARD, Po. 14965, First Tribune, 69 Mason Ave.....Muskegon
HOLLAND, RAY K., Po. 11476, First Tribune, care Gardner & Williams, Cornwall Building.....Ann Arbor
(Geo. E. Lewis, Po. 11481, Second Tribune)
KIMBLE, RICHARD L., Po. 283, First Tribune, care Electric Supply Co...Saginaw
(Geo. A. Trombley, Po. 14750, Second Tribune)
(T. E. Lowe, Po. 11027, Second Tribune)
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St.....Traverse City
*MCCLOY, A. S., Po. 11051, First Tribune, care Stevenson Hotel.....Detroit
*(J. T. Pearson, Po. 11210, Second Tribune)
*RAYNES, J. FRANK, Po. 13965, First Tribune, care Michigan Carton Co., 61 West St.....Battle Creek
(*Edw. G. Austin, Po. 15151, Second Tribune)
*SCHAGANE, P. F., Po. 13871, First Tribune, 617 So. Saginaw St.....Flint
(*L. G. Copeman, Po. 7219, Second Tribune)
*WATSON, GEO. H., Po. 12848, First Tribune, care Consumers Power Co., 124 Monroe St.....Grand Rapids
*R. H. Vandermass, Po. 16484, Second Tribune)

MINNESOTA

*CURTIS, O., Po. 11830, First Tribune, care Tri-State Tel. & Tel. Co., 301 South Seventh St.....Minneapolis
(*Emil Anderson, Po. 7805, Second Tribune)
FULLER, FLOID M., Po. 8189, First Tribune, 813 Torrey Building.....Duluth

MISSISSIPPI

GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co.....Gulfport
*MCANGE, W. N., Po. 16854, First Tribune, care Southern Telephone & Telegraph Co., Telephone Building.....Corinth
*NEWBILL, HOMER J., Po. 16855, First Tribune, Box 413.....Tupelo
*WILSON, J. B., Po. 18198, First Tribune, care Meridian Light & Railway Co.Meridian
*(H. E. Brandli, Po. 15617, Second Tribune)

MISSOURI

ANDERSON, GEORGE E., Po. 2132, First Tribune, 117 South William St....Moberly
(Nelson Roth, Po. 1427, Second Tribune)
BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co.....Marshall
*BOWLES, JOHN D., Po., 17658, care Springfield Gas & Electric Co.....Springfield
(H. T. Ford, Po. 17761, Second Tribune)
*BRATNEY, JOHN F., Po. 17779, care Missouri & Kansas Telephone Co..Kansas City
*(F. L. Funsten, Po. 3043, Second Tribune)
*CORNELL, A. C., Po. 5756, First Tribune, care Western Electric Co., 814 Spruce St.....St. Louis
(*C. E. Michel, Po. 9061, Second Tribune)
*FOX, CHAS. D., Po. 18163V, First Tribune, care City Light Plant.....St. Joseph
(*S. W. Beale, Po. 6840, Second Tribune)
HENDERSON, C. C., Po. 6249, First Tribune, P. O. Box 302.....Joplin
(A. M. Grall, Po. 4112, Second Tribune)
*NIENHAUS, J. V., Po. 19219, First Tribune, care Perry County Public Utilities Co.....Perryville

NEBRASKA

BURLEY, W. B., Po. 10291, First Tribune, 318½ West Koenig St.....Grand Island
(J. D. Whitmore, Po. 1409, Second Tribune)

NEVADA

*PETERSON, JOHN R., Po. 5888, First Tribune, P. O. Box 388.....Sparks

NEW JERSEY

ALEXANDER, JOHN P., Po. 11892, First Tribune, Broad St. Bank Bldg....Trenton
COLLISON, GEORGE L., Po. 17040, First Tribune (for Passaic County), 188 Ellison St.....Paterson
*COX, W. A., Po. 18960, First Tribune, care Public Service Electric Co....Newark
*(J. N. Adam, Po. 18975, Second Tribune)
*FEY, W. E., Po. 10120, First Tribune, care Diehl Manufacturing Co..Elizabeth
NEWMAN, C. R., Po. 3380, First Tribune, 17½ Howe Ave.....Passaic
*STERLING, HARRY CAULFIELD, Po. 11014, First Tribune, care Atlantic City Electric Co.....Atlantic City
STORTZ, H. W., Po. 16450, First Tribune, care Edison Storage Battery Co..Orange
(J. B. Renwick, Po. 16445, Second Tribune)

NEW MEXICO

*ROBERTS, E. A., Po. 17980, First Tribune, care Public Utilities Co.....Carlsbad
*SHEPARD, JAS. A., Po. 16106, First Tribune, care Deming Ice Electric Co...Deming
*SMITH, JAMES R., Po. 16107, First Tribune, care Raton Electric Light & Power Co.....Raton
*SOUTHARD, W. P., Po. 16108, First Tribune, care Albuquerque Gas, Electric Light & Power Co.....Albuquerque

NEW YORK

(W. M. Deming, Po. 261, Second Tribune)
BARTON, A. H., Po. 5461, First Tribune, care General Electric Co., Schenectady.....Utica
(C. C. MacKenzie, Po. 2029, Second Tribune).....Syracuse
*BURNS, JOHN H., Po. 870, First Tribune, care McCarthy Bros. & Ford, 41 Eagle St.....Buffalo
*(L. F. Philo, Po. 774, Second Tribune)
*HINES, E. G., Po. 16222, First Tribune, 239 West Thirty-Ninth St...New York City
(*J. Lloyd Prince, Po. 4263, Second Tribune)
*REQUA, WM. A., Po. 1277, First Tribune, 95-97 St. Paul St.....Rochester
(*B. E. Finucans, Po. 16134, Second Tribune)
*RUSSELL, R. E., Po. 5561, First Tribune, care General Electric Co....Schenectady

NORTH CAROLINA

ANDERSON, CHAS. B., Po. 14935, First Tribune, care Carolina Power & Light Co.....Raleigh
JONES, WM. T., Po. 5685, First Tribune, P. O. Box 405.....Fayetteville
*PICKARD, B. F., Po. 17250, First Tribune, care North Carolina Public Service Company.....Greensboro
(*James L. Griffin, Po. 5683, Second Tribune)
SPEAKE, CHAS. L., Po. 16993, First Tribune, care Westinghouse Electric & Manufacturing Co.....Charlotte
(Robt. H. Witherspoon, Po. 4717, Second Tribune)

OHIO

*BATEMAN, J. M., Po. 2610V, First Tribune, care Western Electric Co...Cleveland
(*Paul B. Zimmerman, Po. 7305V, Second Tribune)
*BRAUN, W. A., Po. 14652, First Tribune, care Braun Electric Manufacturing Co.....Dover
*CREAGHEAD, THOS. J., Po. 3013, care Creaghead Engineering Co., 342 Main St.....Cincinnati
(*W. P. Holcombe, Po. 901V, Second Tribune)
CRAIN, CHARLES E., Po. 6946, First Tribune, care Crain-Stuart Co....Springfield
(Fred J. Green, Po. 6951, Second Tribune)
*EFFINGER, V. H., Po. 15900, First Tribune, Pres. V. H. Effinger Electric Co.Lima
*EICHHORN, HARRY E., Po. 7099, First Tribune, care Municipal Electric Plant.....Columbus
(G. F. Evans, Po. 16157, Second Tribune)
*HALL, CHAS. S., Po. 12345, First Tribune, care Wm. Hall Electric Co., 916 Oliver St.....Dayton
(*F. B. Steele, Po. 13451, Second Tribune)
(*L. J. Lemen, Po. 13195, Second Tribune)
HENCH, L. W., Po. 7854, First Tribune, care Westinghouse Electric & Manufacturing Co.....Youngstown
(E. A. Sanders, Po. 9666, Second Tribune)
*HURD, WILLIAM P., Po. 9798, First Tribune, District Manager, Northwestern Ohio Light Co.....Urbana
*KUNZ, HOMER C., Po. 15892, First Tribune, care Toledo Railway & Light Company.....Toledo
LANE, ROBERT E., Po. 8422, First Tribune, Stark County League, 1419 Cleveland Avenue.....Canton } Stark County { Alliance, Canton, Massillon
(L. J. Lemon, Po. 3195, Second Tribune)
*LOEWE, P. M., Po. 3942, First Tribune, care Oberlin Gas & Electric Co...Oberlin
MILLER, E. G., Po. 13108, First Tribune, care Warren & Niles Telephone Co.Warren
*MOYER, HAROLD L., Po. 14386, First Tribune, 43 South New York St....Kenmore
*PARKER, HERBERT L., Po. 905, First Tribune, care Conneaut Metal Works Co.....Conneaut
*SALBER, W. E., Po. 14397, First Tribune, 408 Spicer St.....Akron
(*J. D. Witner, Po. 14412, Second Tribune)
*SIMS, E. A., Po. 5965V, First Tribune, care Avery-Loeb Electric Co.....Newark
(*F. C. Morrison, Po. 18630, Second Tribune)
*SLOAT, R. G., Po. 18452, First Tribune, care Sandusky Gas & Electric Co.....Sandusky
*SMITH, E. B., Po. 10596, First Tribune, care Coshocton Gas Co.....Coshocton
(Irwin Miller, Po. 10592, Second Tribune)
*STONE, JAMES L., Po. 19724, First Tribune, care Mansfield Electric Light & Power Co.....Mansfield
*(Joseph Parrot, Po. 19723, Second Tribune)
WESSELL, ERLING, Po. 18094, First Tribune, care Athens Electric Co.....Athens

OKLAHOMA

*BEERBOWER, LINCOLN, Po. 1475, First Tribune, P. O. Box 935.....Enid
*HOWELL, EDWARD, Po. 7896, First Tribune, care Abernathy & Howell Elks Building.....Shawnee
*MEYER, FRANK J., Po. 1484, First Tribune, care Oklahoma Gas & Electric Co.....Oklahoma City
*R. D. Sheldon, Po. 18856, Second Tribune)
*WELCH, CHAS. H., Po. 18858, First Tribune, care City Water & Light Dept. Altus
*WHITE, L. A., Po. 14275, First Tribune, care Muskogee Gas & Electric Co. Muskogee
*WILCOX, E. A., Po. 6830V, First Tribune, care Public Service Co. of Okla....Tulsa
(*J. M. Kinslow, Po. 16770, Second Tribune)

PENNSYLVANIA

*HALLSTROM, A. L., Po., 1611, First Tribune, care Western Electric Co., Eleventh and York Sts.....Philadelphia
(*Frank P. Groves, Po. 3350, Second Tribune)
*FERREE, L. L., Po. 18865, First Tribune, 1830 Regina St.....Harrisburg
(T. R. F. Peyton, Po. 12438, Second Tribune)
FARR, J. S., Po. 14876, First Tribune, 309 Sheredon Ave.....New Castle
(H. N. Wood, Po. 16316, Second Tribune)
*HOMMEL, LUDWIG, Po. 4336, First Tribune, care L. Hommel & Co., 947 Pennsylvania Ave.....Pittsburgh
*KRISE, W. M., Po. 4823, First Tribune, Manager, Jefferson Electric Co.Punxsutawney
LODGE, JOS., Po. 18869, First Tribune, 157 E. Chestnut Street.....Lancaster
MURPHY, WALTER R., Po. 14021, First Tribune, care Meadville Telephone Co.....Meadville
(*Carl W. Wilks, Po. 10848, Second Tribune)
(*W. T. SNYDER, Po. 5128, Second Tribune)
REGER, THOMAS E., Po. 4637, First Tribune, 224 Seventh Ave.....Altoona

SOUTH CAROLINA

(*T. A. Brookbanks, Po. 16460, Second Tribune)

TENNESSEE

*ALLEN, TERRY, W., Po. 18838, First Tribune, P. O. Box 185.....Jackson
*COCHRAN, C. P., Po. 15212, First Tribune, City Hall.....Nashville
(*Grayson Jones, Po. 13782, Second Tribune)
RUTLEDGE, C. B., Po. 2127, First Tribune, care Bluff City Electric Company.....Memphis
(*B. F. Myers, Po. 12911, Second Tribune).....Chattanooga
*SCOTT, E. L., Po. 11162, First Tribune, 115 West Seventh St.....Chattanooga
(*I. L. Faucett, Po. 7425V, Second Tribune)
SELF, LEWIS P., Po. 7888, First Tribune, care Knoxville Electric Co....Knoxville
(Sam P. Watson, Po. 15059, Second Tribune)

(*These First and Second Tribunes appointed by Reigning Jupiter. All Statesmen-at-Large and Statesmen in this list were appointed or elected to serve during this administration.)

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TEXAS

(C. E. Converse, Po. 8558, Second Tribune).....San Antonio
*R. J. Irvine, Po. 6251, First Tribune, care San Angelo Light & Power Co.....San Angelo
Copley, E. F., Po. 7073, Frst Tribune, care Central Electric Co.....Waco
(L. B. Gardner, Po. 11390, Second Tribune)
*Harris, A. L., Po. 10643, First Tribune, care Brush Electric Co.....Galveston
*(Max Levy, Po. 10652, Second Tribune)
Larabee, R. W., Po. 1327, First Tribune, care Southwestern Electric & Machine Co.....El Paso
*Montgomery, John G., Po. 11355, First Tribune.....La Marque
*Munroe, Walter N., Po. 3085, First Tribune, care Texas Power & Light Co.....Paris
*Newning, H. M., Po. 16304V, First Tribune, 1118 Calhoun St.....Houston
*Patrick, S. V., Po. 1933, First Tribune, 2805 Monterey St.....San Antonio
Reid, Bruce, Po 18290, First Tribune, care Gulf Refining Co.....Port Arthur
(Edward T. Keck, Po. 18284, Second Tribune)

*Smith, Geo. B., Po. 6649, First Tribune, 309 Guadalupe St.....San Marcos	Central Texas League	Lockhart, Luling, Seguin, New Braunfels, San Marcos
*(Fred J. Bachman, Po. 16777, Second Tribune)		

*Wakefield, R. S., Po. 2606, First Tribune, 1312 Busch Building.....Dallas
*White, Frank A., Po. 2216, First Tribune, care West Texas Electric Co.Sweetwater
*Wright, J. A., Po., 2242, First Tribune, care Nunn Elect. Company.....Amarillo

UTAH

*Douglas, Jas. A., Po. 16984, First Tribune, care Municipal Electric Plant.....Salt Lake City
*Wolf, H. M., Po. 12774, First Tribune, President, Cache Valley Electric Co..Logan

VIRGINIA

*Brinkley, R. J., Po. 14497V, First Tribune, care Virginia Railway & Power Co.....Suffolk
*Evans, W. T., Po. 14939, First Tribune.....Hopewell
Ficklin, W. F., Jr., Po. 12453, First Tribune, care Staunton Lighting Co..Staunton
(R. F. Lyons, Po. 12459, Second Tribune)
*Goodloe, H. B., Po. 11169, First Tribune, 116 First National Bank Bldg..Roanoke
*Marchmont, G. T., Po. 14497, First Tribune, care Western Electric Co..Richmond
*(W. C. Bell, Po. 14494, Second Tribune)
*Woodhouse, H. C., Po. 6618, First Tribune, No. 54 Bank St.....Norfolk
*(C. S. Ristine, Po. 7477, Second Tribune)

WASHINGTON

*Harold, W. H., Po. 840, First Tribune, Box 455.....Walla Walla
(H. B. Pierce, Po. 7235, Second Tribune).....Spokane

WEST VIRGINIA

Costine, Thos. E., Po. 7699, First Tribune, 1059 McColloch St.....Wheeling
(T. R. Fagin, Po. 9161, Second Tribune)
Davisson, W. C., Po. 14813, First Tribune, care West Virginia Water & Electric Co.....Charleston
Goldey, P. R., Po. 5784, First Tribune, 1125 Nineteenth St.....Parkersburg
Haddox, H. A., Po. 9164, First Tribune, 843 Fourth Ave.....Huntington

WISCONSIN

*Carson, A. G., Po. 13999, First Tribune, care Eastern Wisconsin Railway & Light Co.....Fond du Lac
*Dearth, E. C., Po. 17144V, First Tribune, care Wisconsin & Minnesota Light & Power Co.....Eau Claire
(Holmes Ives, Po. 18253, Second Tribune)
*Dunham, A. W., Po. 7352, First Tribune, care Sun Ray Manufacturing Co.Oshkosh
*Engsberg, B. C., Po. 15985, First Tribune, care Light and Water Dept.Lake Mills
*Ives, Holmes, Po. 18253, First Tribune, care Wisconsin-Minnesota Light & Power Company.....Chippewa Falls
*Linker, P. R., Po. 14302, First Tribune, care Wisconsin-Minnesota Light & Power Co.....La Crosse
(*Dan. Whalen, Po. 16022, Second Tribune)
*Tessier, Leonard L., Po. 18823, care De Pere Electric Light & Power Co..De Pere
Roberts, Elmer D., Po. 10997, First Tribune, 308 Sixth St.....Racine
*Scheurmann, A. R., Po. 17653, First Tribune, 8 Main St.....Watertown
St. John, John, Po. 12836, First Tribune, care Madison Gas & Electric Co..Madison
*Pedley, W. S., Po. 12831, First Tribune.....Platteville
*Van Vleet, R. M., Po. 1094V, First Tribune, care Cutler-Hammer Manufacturing Co.....Milwaukee
(*J. W. Pfeifer, Po. 10981, Second Tribune)

CANADA

ALBERTA

(David Conn, Po. 11885, Second Tribune)

MANITOBA

*Baker, L. R., Po. 12849, First Tribune, Oakview Ave., East Kildonan, Man.....Winnipeg
*J. S. Henry, Po. 5994, Second Tribune)

ONTARIO

(C. B. Deeks, Po. 17101, Second Tribune).....Coniston
*Cooke, W. P., Po. 16714, First Tribune, P. O. Box 178.....Port Arthur

SASKATCHEWAN

Sangster, A. G., Po. 7496, First Tribune, 820 Fourteenth St., East..Saskatoon

SPAIN

Eddy, H. W., Po. 11105, First Tribune, care Riegos y Fuerza del Ebro S. A. Apartado 491.....Barcelona

Coming Conventions

The Jovian Order

Annual convention, Hotel McAlpin, New York City, October 22-23. Mercury, Ell C. Bennett, Syndicate Trust Building, St. Louis, Mo.

Electrical Committee, National Fire Protection Association

Adjourned annual meeting, New York City, October 23-24. Secretary, Ralph Sweetland, 141 Milk Street, Boston, Mass.

National Electric Light Association, Southeastern Section

Annual convention, Birmingham, Ala., October 24 to 26. Secretary, T. W. Peters, Columbus, Ga.

JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

Akron—Business meetings and luncheons at president's call. Secretary, W. N. Lockhert, Po. 14383, care N. O. T. & L. Co.

Benton Harbor—Second Tuesday of each month, at place determined by members. Secretary, C. O. Nichols, Po. 15537, care Benton Harbor & St. Joseph Railway & Light Co.

Buffalo—Saturday, 12:30 p. m., Lafayette Hotel. Chairman Edmond D. McCarthy, Po. 589-10, 41 East Eagle Street.

Chattanooga—Wednesday, 12 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

Chicago—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge, 1900 Continental & Commercial Bank Building.

Cincinnati—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, O. B. Marsh, Po. 17718, care Federal Sign System (Electric), 37 East Third street.

Cleveland—Regular meeting, Thursday, 12 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hotel Statler.

Columbus—Every other Tuesday, 6:00 p. m. and 12 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Ry. Power & Light Co.

Dallas—First and third Mondays, Hotel Adolphus, 12:15 p. m. Secretary, E. E. Roessler, Po. 12128, P. O. Box 1506.

Dayton—First and third Mondays of each month, 12 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Co.

Denver—Wednesday, 12:15 p. m., Kaiserdorf Hotel. Secretary, R. Arnold Lewis, Po. 11514, care Edins Lamp Works.

Eau Claire.—First Monday each month. Secretary, Gurth Williams, Po. 18268.

Fort Wayne—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna street.

Fort William—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Co.

Galveston—Meet on call. Secretary, Howard Jolly, Po. 16826, care Postal Tel. Co.

Grand Rapids—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Co.

Harrisburg (Pa.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Co.

Huntington—Last Friday each month, Huntington Hotel. Secretary, H. A. Haddox, Po. 9164, 1116 Fourth avenue.

Indianapolis—Monday, 12:15 p. m. Secretary, A. H. Smith, Po. 13580, care Ford Motor Car Co., 1315 East Washington Street.

Kansas City—Every other Friday, 12:15 p. m., Sexton Hotel, Secretary, T. R. Harber, Po. 18908, 1500 Grand Avenue.

La Crosse—First Thursday each month, Elks Club, 6 p. m. Secretary, Dan. J. Whalen, Po. 16022, care Thill-Manning-Whalen Co.

Little Rock—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Co.

Los Angeles—Wednesday, 12 m., Jahnke's Tavern, 534 S. Spring St. Secretary, Clifton Peters, Po. 12734, 108 Edison building.

Louisville—Tuesday, 12:15 p. m., Hotel Henry Watterson. Secretary, C. C. Dicken, Po. 16660, care Louisville Gas & Electric Company.

Meadville—Tuesdays, 12:30 p. m., Kepler Hotel.

Milwaukee—Tuesday, 12 m., Maryland hotel.

Minneapolis—First and second Wednesday each month, Elks Club, Second avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

Muskogee—Secretary, J. H. Schmidt, care Muskogee Gas & Electric Co.

Nashville—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

Newark—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Co.

New Orleans—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne St., New Orleans, La.

New York—First Wednesday each month, 12:15 p. m., Browne's Chop House, 1424 Broadway. Secretary, H. E. Cleland, Po. 18656, care Electrical World, 239 West Thirty-Ninth Street.

Oklahoma City—Monday, 12:15 p. m., Lee Huckins Hotel. Secretary, O. T. Jenkins, Po. 14273, care Nunn Electric Co.

Peoria—First and third Saturdays of each month, 1 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Co.

Philadelphia—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon St.

Pittsburgh—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, J. H. Van Aernam, Po. 14051, care General Electric Co.

Pittsfield—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's restaurant, Kellog street. Secretary, J. O. Roser, Po. 10412, care General Electric Co.

Richmond — Third Wednesday of each month, Business Men's Club. Secretary, L. E. Walker, Po. 6610, care Western Electric Co.

Rochester—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Co.

Sacramento—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto avenue.

San Antonio—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Co.

San Francisco—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Ridpath, Po. 7739, 505 Rialto building.

Spokane—First and third Wednesdays of each month, 12 m., Davenport's hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Co.

Stark County—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

St. Louis—Tuesday, 12:15 p. m., Mercantile Club. Secretary, Geo. McD. Johns, Po. 9052, Room 401, City Hall.

St. Joseph, Mo.—Secretary, W. R. Thomas, Po. 1489, care American Elect. Co.

St. Paul—First and third Thursdays of each month, 12:10 p. m., Emporium Tea Rooms. Secretary, A. L. Frankenburger, Po. 5289, care Western Electric Co., 235 East Sixth street.

Tulsa, Okla.—Monday, 12 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G. Walker, Po. 6871, 18 West Third Street.

Washington—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Co.

Wichita—First and third Mondays of each month, 12 m., Wichita Club. Secretary, Homer S. Fox, Po. 17808, care Southwestern Electric Co.

Winnipeg—Every other Wednesday, 12:15 p. m., Hotel St. Charles. Secretary, C. T. Kummen, Po. 15957, 386 Donald Street.

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JOVIAN HOTELS

HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their **current membership cards** at the time of settlement. **Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage.** Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

	Minimum Without Bath	Minimum With Bath
Asheville N. C.—Langren	.....	.....
Atlantic City, N. J.—Isleworth	$1.50	$2.00
Baltimore, Md.—Emerson	$2.00	$2.50
Boise, Ida.—Idanha	$1.00	$1.50
Boston, Mass.—Brunswick	.....	.....
Charlotte, N. C.—Buford	$1.00	$1.50
Chattanooga, Tenn.—Theresa	.....	.....
Colorado Springs, Colo.—Acacia	.....	.....
Columbia, S. C.—Colonial	.....	.....
Dallas, Tex.—Oriental	$1.50	.....
Des Moines, Ia.—Kirkwood	.....	.....
Denver, Colo.—Albany	$1.00	$1.50
Detroit, Mich.—Hotel Tuller	.....	.....
Dixon, Ill.—Dixon Inn	$1.00	.....
Edmonton, Alta.—Alberta	.....	.....
Eau Claire, Wis.—Eau Claire	.....	.....
Ft. Wayne, Ind.—Wayne	$1.00	.....
Ft. Worth, Tex.—Metropolitan	.....	.....
Gary, Ind.—Gary	$1.00	$1.50
Grand Rapids, Mich.—Livingston	$1.00	.....
Harrisburg, Pa.—Columbus	.....	.....
Houston, Tex.—Bender	$1.50	$2.00
Hutchinson, Kan.—Chalmers	.....	.....
Idaho Falls, Ida.—Eleanore	$1.00	$2.00
Jackson, Miss.—Royal	.....	.....
Jacksonville, Fla.—Mason	.....	.....
Jacksonville, Ill.—Pacific	.....	.....
Kalispell, Mont.—Kalispell	$1.00	.....
Kansas City, Mo.—Coates	$1.00	$1.50
Lethbridge, Alta.—Alexandria	$1.00	.....
Los Angeles, Cal.—Clark / New Rosylyn	$1.00	$1.50
Louisville, Ky.—Galt	.....	.....
Madison, Wis.—Capital	$1.00	.....
Milwaukee, Wis.—Charlotte	$1.00	.....
Mitchell, S. D.—New Navin	.....	.....
Montgomery, Ala.—Exchange	.....	.....
Montreal, P. Q.—St. Lawrence Hall / Windsor	.....	.....
Muskegon, Mich.—Muskegon	$1.00	$1.50
New Orleans, La.—De Soto	$1.00	.....
New York, N. Y.—Breslin	.....	.....
Niagara Falls, N. Y.—Prospect	.....	.....
Norfolk, Va.—Southland	$1.00	$1.50
Oshkosh, Wis.—Tremont	.....	.....
Peoria, Ill.—Mecca	$1.00	.....
Philadelphia, Pa.—New Bingham	$1.50	$2.50
Pittsfield, Mass.—Wendell	$1.50	.....
Portland, Ore.—Multnomah	$1.50	.....
Oregon	$1.00	$2.00
Richmond, Va.—Jefferson	$1.50	$2.50
Richmond	$1.50	$2.50
Roanoke, Va.—Rockledge	$1.00	.....
Rochester, N. Y.—Powers	.....	$2.00
Rutland, Vt.—Berwick	.....	.....
St. Joseph, Mo.—St. Francis	.....	.....
St. Louis, Mo.—American	$1.50	.....
Salt Lake City, Utah—Newhouse	.....	.....
San Angelo, Tex.—Landon	.....	.....
San Diego, Cal.—San Diego	$1.00	.....
San Francisco, Cal.—Argonaut	$1.00	$2.00
Sutter	$1.50	.....
Santa Barbara, Cal.—Potter	.....	.....
Schenectady, N. Y.—Mohawk	$1.00	$2.00
Seattle, Wash.—Seattle	$1.00	$2.00
Sheridan, Wyo.—Sheridan	.....	.....
Shreveport, La.—Youree	.....	.....
Sioux City, Ia.—Martin	$1.00	$2.00
Spokane, Wash.—Spokane	.....	.....
Springfield, Mo.—Colonial	.....	.....
Tacoma, Wash.—Olympus	.....	.....
Three Rivers, Mich.—Three Rivers	$2.00	.....
Tucson, Ariz.—Heidel	.....	.....
Vicksburg, Miss.—Carroll	$1.00	.....
Waco, Tex.—New State	$1.00	$2.00
Watertown, S. D.—Kampeska	$1.00	.....
Winnipeg, Man.—St. Regis	$1.50	.....
Wellington	$1.00	$1.50
Winona, Minn.—Winona	.....	.....

MANUFACTURER'S AGENT with facilities for marketing electrical lines in the East, desires permanent connection on commission or straight purchase basis with factories on exclusive territorial basis. Address "L," care of The Jovian, Syndicate Trust Bldg., St. Louis, Mo.

TRAVELING REPRESENTATIVE

We desire the service of an experienced traveling representative to cover Alabama and Tennessee. Good proposition for the right man. Application will be considered in confidence. Address reply to either of the following: J. J. Smith, manager, Baltimore Electrical Supply Co., Atlanta, Ga., or Mr. W. J. Flannery, president, Baltimore Electrical Supply Co., Baltimore, Md.

SALES AGENCY WANTED

In Philadelphia territory. A person of excellent reputation, aggressive, with the ability to put the proper "ginger" back of any meritorious specialty, desires to hear from one or more concerns. Will however, accept not more than can be properly demonstrated, thereby giving the employer high-class representation. Address, P. O. Box 70, Narberth, Pa.

MANAGER—Technical Education, University of Ill. Six years experience electrical drafting, designing installations, sales and Street Railway Departments. Nine years experience Vice-President and General Manager of the Great Bend Water and Electric Company, and the Hoisington Electric and Ice Company; Renewed Franchises, Street Lighting Contract; obtained White Way Contract; Revised Rate Schedules in both towns; Successful in securing large industrial contracts and dealing with public in general. Will consider proposition paying three thousand or better per annum. Address J. R. Murphy, Great Bend, Kansas.

JOVIANS LOOK!

THE Jovian Constitution provides that a ballot be published here on which each Jovian may indicate his preference as to any individual for any elective office. The ballots are to be handed to the Nominating Committee for their information and guidance. Fill it out and mail to

THE JOVIAN ORDER
SYNDICATE TRUST BLDG. ST. LOUIS

THE JOVIAN ORDER
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THE JOVIAN

Volume Eleven NOVEMBER, 1917 Number Twelve

THE NEW JUPITER OF THE JOVIAN ORDER

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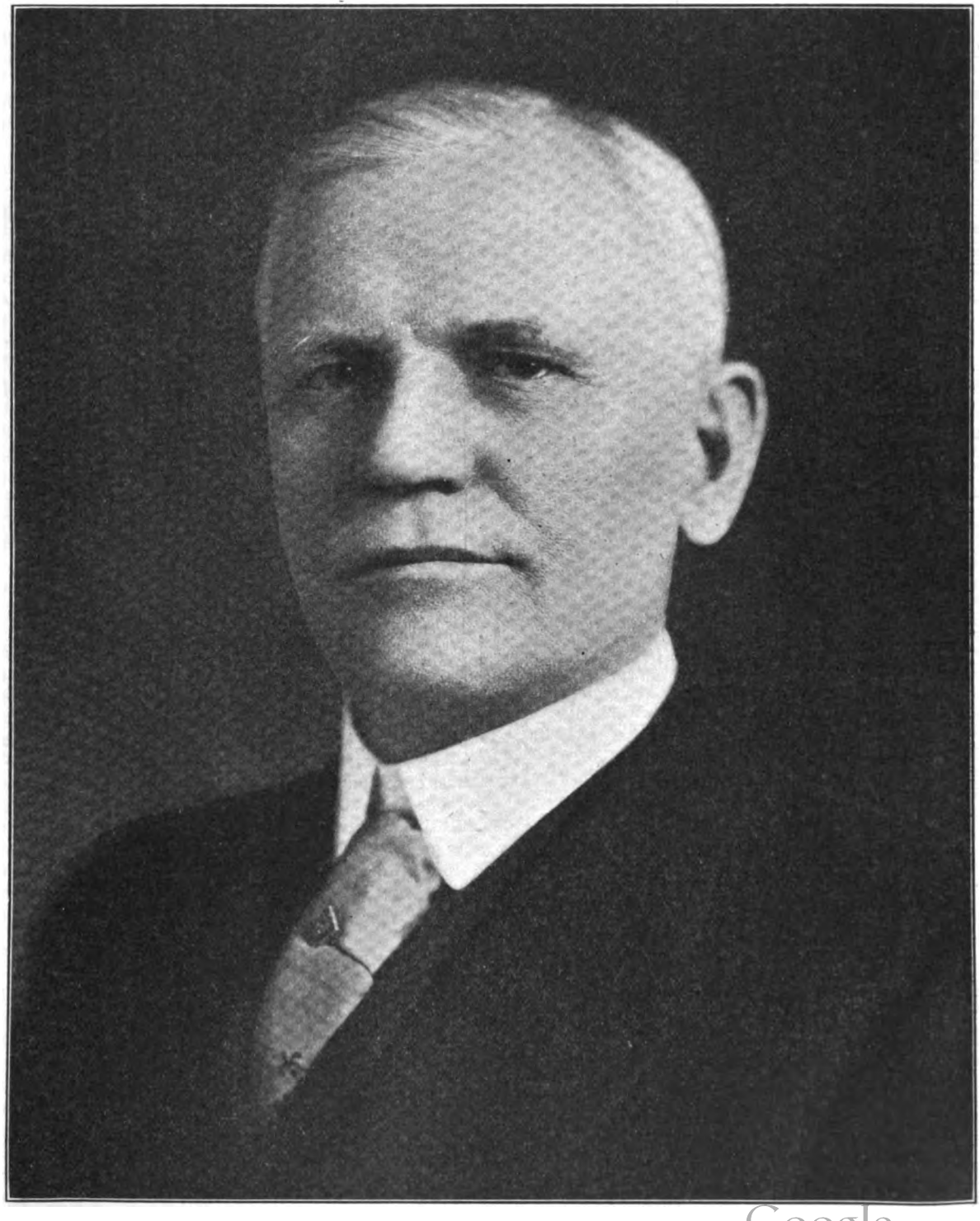

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THE JOVIAN

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THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

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Past Jupiter Fifteen, New York City.

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THE WORK OF THE JOVIAN CONVENTION

IN ANOTHER part of this issue is given the action of the recent Jovian Annual with respect to changes in the Order's scheme of operation; it is printed in the words of the Convention, later to be put into the formal phrasing necessary to make it a part of Jovianism's Constitution.

Much that was passed we believe was wisely handled, some of it we are a trifle in doubt about, but all of it we know was adopted with but one object in view—the forwarding of our Order.

The men who attended that Convention did so at the sacrifice in an unselfish manner, of their time, energy, money and brain-power, and it is the duty of those who could not, or did not, attend to stand by the action of that Convention to the limit, even though through all its work it did not in some few particular phases take just the action that some absent member desired.

Jovianism is facing a critical, probably the most critical, year in its entire career. There is nothing at all impossible in the situation and the Order can and will come through unscathed, because it will, we are sure, have the constructive thought and effort of every man who feels, within himself, that he has earned the right to speak of it and work for it.

The man who has not earned that right, but who assumes the unfortunate role of a destructive critic will brand himself a traitor to his Order, to his industry and to his own future welfare.

Let no man dare to destroy what some other man has sincerely, painstakingly and unselfishly builded unless he can replace it with something better. That the world at large, and that includes our great industry and Order, has no place for the ruthless destroyer, and will see to it that in one way or another and in good time he is taken from the association of right-thinking men, is today surely a thoroughly established principle.

In the amendments that were passed, the expense of operating the Order has been materially decreased without injuring the best effectiveness of the Central Office. The chief function of the Order has been definitely set as that of a clearing house for local Leagues, and the means provided for the substantial bulwarking of those Leagues.

The latter has been accomplished by allowing chartered Leagues to retain one-half ($2.00) of each dues collection of $4.00, in place of the amount of fifty cents previously allowed. Further, the initiation fee has been waived entirely for a sufficient period to allow a rapid building-up of membership for both the local and the parent organizations.

If these two changes are properly applied a tremendous gain should be made, far exceeding the loss that we must expect due to military service and withdrawals. Proper application is about ninety-eight per cent optimism instead of pessimism, constructive suggestion and effort in place of destructive criticism, and the making of our slogan "All Together All the Time * * * " a thing of life and daily practice instead of a mere lip-service.

The Central Office is preparing a practical plan for the most effective method of utilizing the advantages that are now offered Leagues for increasing their Jovian members and operating under a Jovian Charter. This will go to all local officers and eventually will be up to the members to make it or break it. Boys, let's MAKE it, and a bigger and better Jovian Order at the same time.

* * * *

EDUCATIONAL CLASSES

THAT the establishment of educational courses by Jovian Leagues for members is a service that delivers a great benefit is unquestioned. Several Leagues are now conducting such courses successfully and others are arranging for them.

Not only is the League delivering a real and lasting service by promoting educational advantages, but the organization of classes stimulates interest in the local organization and in the Jovian Order in other ways.

A great many members, especially the younger ones, are not able to attend the luncheon meetings regularly because their

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duties conflict, but they are able to attend the night classes and equip themselves for more responsible positions.

Consequently, educational courses broaden the usefulness of the League, and no better lesson in co-operation could be taught than that of using its facilities to promote individual efficiency.

* * * *

REDUCTION OF ADVERTISING FALSE ECONOMY

UNDER the caption, "Lest We Forget," in the Weekly Bulletin published by the United States Food Administration, James H. Collins, its editor, asserts: "It pays to advertise, and the time to advertise is all the time."

Mr. Collins' work is to promote the conservation of food, and he weighs his utterances very carefully before turning them over to the printer. He knows that a certain amount of good, substantial food is needed to maintain the high degree of efficiency required of the workers of the nation at this critical period. In his articles he does not advocate reducing the amount of food that is required to produce energy and preserve health. His efforts are directed towards the elimination of wastefulness and to promote the use of foods that are the more plentiful.

HE DOES NOT ADVOCATE THE SAVING OF FOOD AT THE EXPENSE OF EFFICIENCY. If he pursued such a policy, and succeeded, he would not be benefitting the nation; he would be rendering it weaker.

That which is true of food conservation is equally true when applied to the business of the country. The expense of operation is the food that must be fed to every business to produce energy. Where it can be conserved by eliminating all wastefulness, or where it may be reduced by the use of less expensive means that are fully as efficient a saving may be achieved. But when such expense as contributes to the energies that are vital to its welfare are curtailed, the business is bound to suffer.

Consequently any inclination to reduce advertising expense at this time should be analyzed carefully. In fact, there is an apparent need for more efficient advertising, than for its curtailment.

Advertising is a sales energy that cannot be reduced without decreasing sales. The firm or corporation that attempts a saving by reducing its advertising appropriation is practically certain to find it has practiced a false economy. In fact, Mr. Collins' statement could be logically changed to read: "It pays to advertise, and there was never a more urgent need of advertising than at present."

The inflation of business by unnatural causes produces a condition that should be watched closely. When the condition that causes the inflation passes, there will be a reaction to the substantial business of natural conditions. Every business man knows the amount of labor required to bring this natural business to the point it stood prior to the beginning of the unnatural condition. He knows the amount of advertising required to maintain it. Now the question is, will he find this natural business still there when the unnatural period passes, if he has not properly nourished it?

Will he be able to hold this natural business by less advertising because an unnatural condition exists, or, in case he fails to protect it, will he not find that he will have to rebuild it entirely, at the full expense of reconstruction?

According to strict business principles, is not the latter expediency by far the more likely? In fact, isn't it practically certain to evolve?

Another question—In the history of any present-day business man's experience, has there ever been a period during which business was as unnaturally inflated as at present, or a period during which as great care should be exercised to nourish that substantial business to which he must eventually react?

This being true, there is every reason why more efficient advertising is needed, and no practical reasons why it should be decreased.

JOVIAN PLEDGE TO WIN THE WAR

During the afternoon session of October 23, Chas. A. Newning, Po. 2, Past Jupiter Four, chairman of the resolution committee, presented the following announcement concerning the war, which was adopted by a rising vote:

FOR the first time within the history of our Order, it meets under the shadow of a great war in which our nation is engaged as one of the participants. It is, we believe, fitting and proper that we should define in unmistakable language the attitude of this great organization toward our nation in this great struggle.

For nearly three years our nation has been the target for abuse, insult and degradation at the hands of an unscrupulous power, blind with the lust of conquest by war and including our people in its path of destruction. Stinging under the lash of insults to our nation, we finally threw off our apathy and entered the great contest entirely from principles of humanity and for the preservation of the liberties that we have so long possessed. That our nation did right in entering this war we declare and affirm, and we further pledge the resources of our great Order in men, money and influence to the support of our nation in waging this great conquest for liberty.

We ask and demand that our members, wherever located and however situated, give of their time, their money and their labor to our nation in this struggle. We must not only measure our patriotism in dollars, but we must give all that we possess in brains, energy and devotion toward this most sacred cause in which we are now engaged. This requires sacrifice upon our part, and we ask and request that every member make this sacrifice. The life of our Order, the liberties of our people and the existence of our nation depend upon this sacrifice that we must make.

There is no place for the slacker in our membership. There is no excuse for shifting responsibilities, and we expect that every member will give all that he possesses that is good, if necessary, for the winning of this struggle. We stoutly affirm and maintain that we want no peace until that peace shall come stripped of the lust of power and blessed by the humanity of men one to another. In this national convention assembled, we pledge to our nation and its officers our lives, our means and our power to win this war for right.

We further request that this resolution be not only spread upon the minutes of our Order but that a copy be sent to each league with a request that it be brought to the attention of every member, and, further, that a copy be sent to those in charge of our national defense, and that the pledge that we have made herein be kept with honor.

CHANGE OF PRESS DATE

OWING to conditions existing in the work of gathering news from the various Leagues of the Order, it has been found advisable to change the date of sending The JOVIAN to press—on the first of the month instead of the fifteenth, as heretofore.

By setting the press date back fifteen days we find that we are able to include in the issue reports of Rejuvenations held during the preceding month, whereas by going to press on the fifteenth the Rejuvenations reported would in some instances be nearly two months old and the affair almost forgotten, before the magazine was off the press.

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Congressmen and Statesmen Elected at the Fifteenth Annual Convention

SIXTEENTH CONGRESS

DISTRICT No. 1
William R. Phipps, Po. 10676
Galveston, Texas.

DISTRICT No. 2
Joseph Insull, Po. 16729
Pittsfield, Mass.

DISTRICT No. 3
Harry W. Alexander, Po. 17191,
New York City.

DISTRICT No. 4
Arthur G. Pierce, Po. 2896,
Pittsburgh, Pa.

DISTRICT No. 5
T. J. Creaghead, Po. 3013,
Cincinnati, Ohio.

DISTRICT No. 6
Julien Binford, Jr., Po. 1174V,
Atlanta, Ga.

DISTRICT No. 7
W. R. Power, Po. 2784,
Huntington, W. Va.

DISTRICT No. 8
Galen Crow, Po. 925,
Guthrie, Okla.

DISTRICT No. 9
L. O. Ripley, Po. 7042V,
Wichita, Kan.

DISTRICT No. 10
Henry N. Remington, Po. 678V,
Peoria, Ill.

DISTRICT No. 11
William T. Wallace, Po. 1716,
Boise, Idaho.

DISTRICT No. 12
H. L. Woolfenden, Po. 1062V,
Denver, Colo.

DISTRICT No. 13
J. N. Colkitt, Po. 2627,
Los Angeles, Cal.

STATESMEN

ARKANSAS
C. J. Griffith, Po. 13901,
Little Rock, Ark.

ARIZONA, CALIFORNIA, NEVADA
Lewis E. Sperry, Po. 9415,
San Francisco, Cal.

IDAHO
Ernest C. Kiersted, Po. 10258,
Twin Falls, Idaho.

IOWA
H. W. Garner, Po. 19507,
Des Moines, Iowa.

ILLINOIS
L. C. Spake, Po. 15397V,
Chicago, Ill.

INDIANA
Wallace O. Lee, Po. 11440,
Indianapolis, Ind.

KENTUCKY
J. B. Riley, Po. 5297,
Louisville, Ky.

LOUISIANA
W. A. Porteous, Po. 9226,
New Orleans, La.

MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA
W. H. Vilett, Po. 3675V,
Minneapolis, Minn.

MARYLAND
J. G. Livingston, Po. 1721,
Baltimore, Md.

MASSACHUSETTS
C. B. Burleigh, Po. 398,
Boston, Mass.

MISSOURI
Fred Johnson, Po. 177V
St. Louis, Mo.

NEW JERSEY, DELAWARE
James Howlett, Po. 279,
Elizabeth, N. J.

NEW MEXICO
J. A. Shepard, Po. 16106,
Deming, N. M.

NEW YORK
E. G. Hines, Po. 16222,
New York, N. Y.

OHIO
N. H. Boynton, Po. 5604V,
Cleveland, Ohio.

OKLAHOMA
Charles McCallum, Po. 3394,
Oklahoma City, Okla.

OREGON
A. S. Moody, Po. 4576,
Portland, Ore.

PENNSYLVANIA
Geo. H. Criss, Po. 3364,
Pittsburgh, Pa.

RHODE ISLAND
E. R. Davenport, Po. 8019,
Providence, R. I.

SOUTH CAROLINA
W. W. Fuller, Po. 16462,
Charleston, S. C.

TENNESSEE
C. J. R. Watson, Jr., Po. 2131V,
Memphis, Tenn.

TEXAS
Hiram O. Clark, Po. 6629,
Houston, Texas.

UTAH
Chas. H. Talmage, Po. 1431,
Salt Lake City, Utah.

VERMONT
E. E. Larabee, Po. 1145,
Bennington, Vt.

VIRGINIA
Guy E. Siler, Po. 7479,
Richmond, Va.

WISCONSIN
Carl Golin, Po. 12385V,
Milwaukee, Wis.

PROVINCE OF ALBERTA
Norman S. Richards, Po. 8985,
Calgary, Alberta.

PROVINCE OF MANITOBA
J. H. Schumacher, Po. 4742,
Winnipeg, Manitoba.

PROVINCE OF QUEBEC
E. N. Hyde, Po. 1614,
Montreal, Quebec.

(In Districts and States where no officers were elected, the present incumbents retain office.)

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JOVIAN CONVENTION A CONSTRUCTIVE BUSINESS GATHERING

MANY IMPORTANT CHANGES COVERING OPERATIONS OF LEAGUES, INITIATION AND OTHER FEATURES ADOPTED

OPENING with a luncheon at the Hotel McAlpin, New York City, October 22, the Fifteenth Annual Convention of the Jovian Order devoted its entire time to the business of the fraternity, the work of adopting constructive amendments to the constitution and the election of officers.

James M. Wakeman, Po. 524, Fifth Apollo, general manager of the Society for Electrical Development, presided at the luncheon as toastmaster, introducing as speaker the Rev. Wallace Petty, who made a stirring patriotic address.

Jupiter Henry L. Doherty, Po. 3208-33, then called the convention to order, and requested Henry Harris, Po. 2888-48V, Fourteenth Pluto, to preside as chairman. This made the sixth convention over which Jovian Harris has presided.

A telegram was read by Mercury Ell C. Bennett, Po. 3932-13V, from Edward N. Hurley, chairman of the United States Shipping Board, acknowledging an invitation from Jupiter Doherty to address the convention, expressing appreciation of the work the Jovian Order was doing in aiding to build up the electrical industry, and his regrets at not being able to be present.

Jupiter Doherty then outlined briefly the necessity for holding the convention notwithstanding the prevalence of war conditions. He asserted that the delegates and visitors would be surprised to know how effectively and to what extent their associates were serving their country at arms, in matters of preparation and in promoting the sales of Liberty Bonds.

The following committees were then appointed:

Resolutions

Charles A. Newning, Po. 2, Past Jupiter Four, chairman; Joseph Insull, Po. 16729; B. M. Downs, Po. 2508; D. L. Gaskill, Po. 4499, and H. C. Heidrich, Po. 14439.

Mercury's Report

Sam A. Hobson, Po. 3V, Past Jupiter Three, chairman; J. M. Wakeman, Po. 524, Fifth Apollo; A. J. Binz, Po. 1921V, Thirteenth Neptune; W. W. Mumma, Po. 6957, and George H. Duffield, Po. 4209.

Credentials

F. E. Watts, Po. 1509-47, Past Jupiter Eleven, chairman; R. E. Russell, Po. 5561; J. O. Roser, Po. 10412; Thomas J. Creaghead, Po. 3013, and Jas. A. Cayce, Po. 2416.

Jewelry Committee

H. B. Kirkland, Po. 285-5, Past Jupiter Five, chairman; S. H. M. Agens, Po. 456; Arthur G. Pierce, Po. 2896; J. O. Roser, Po. 10412, and W. A. Cox, Po. 18960.

Mercury's Compensation

J. F. Strickland, Po. 30, Jupiter Elect, Chairman; C.W. Hobson, Po. 1, Past Jupiter One; George Williams, Po. 6849; Julien Binford, Jr., Po. 1174V, and Arthur Pierce, Po. 2896.

The morning session of Tuesday was devoted almost wholly to addresses.

John W. Lieb, Po. 11977, chairman of the National Committee on Gas and Electric Service, embodied in his address an outline of the work which that organization has done to bring about effective co-operation of the utilities with the government in matters relating to the war. Jovian Lieb stated that early in the work of the committee the question was raised as to whether the committee could be of assistance in the solution of fuel problems of municipal plants as well as of privately owned plants. The work of the committee he assured had been directed solely towards achievements that would render the greatest amount of value to the government. Its object was to render a purely patriotic service, and in pursuance of that purpose, there had not been, nor would there be, any discrimination or distinction between utilities municipally or privately owned.

Lynton T. Block, Po. 11542, representing the Employers' Indemnity Corporation of St. Louis, explained the nature of the insurance benefit that had been adopted by the Order. Jovian Block showed very clearly the value of the insurance and the amount of saving made possible by the plan.

At the afternoon session the proposed amendments were discussed at length, and adopted with changes agreed upon.

The principal contest was made over the proposed method of nominating and electing congressmen and statesmen. It was decided to embody in the amendment a provision permitting contests by candidates for whom petitions are presented twenty-four hours before election.

The amendment to waive the initiation fee from October 24 to February 1, 1918, was then adopted.

The purpose of the amendment is to induce non-Jovian leagues to charter, and to bring into the Order as rapidly as possible, all of their membership.

After February 1, 1918, the initiation fee will be $5.00, one-half to be retained by the local leagues and the remainder to be remitted to the Central Offices of the Order.

Following the adoption of the amendments, W. N. Matthews, Po. 496-44V, Past Jupiter Twelve, chairman of the nominating committee, then announced the names of J. F. Strickland, Po. 30, president of the Texas Power & Light Company, of Dallas, Texas, for Jupiter and Ell C. Bennett, Po. 3932-13V, of St. Louis, for Mercury.

Then followed the balloting for officers, with the results as outlined on another page.

The convention was brought to a close with a banquet on the evening of October 23, at which addresses were made by Sam A. Hobson, Po. 3V, Past Jupiter Three; Frank E. Watts, Po. 1509-47, Past Jupiter Eleven; W. N. Matthews, Po. 496-44V, Past Jupiter Twelve; Jupiter Henry L. Doherty and Dr. Talcott Williams, dean of the School of Journalism of Columbia University.

The following chairmen and vice-chairmen were in charge of the convention for the New York League:

Entertainment

Jas. R. Pollock, Po. 18675, Fifteenth Vulcan; Walter Neumiller, Po. 5402; George V. R. Pelz, Po. 18674.

Registration

Roy E. Schaulin, Po. 2943.

Program

James M. Wakeman, Po. 524, Fifth Apollo.

Decoration

George Williams, Po. 6849.

Reception

Arthur Williams, Po. 1917; Jas. R. Strong, Po. 742-4, Sixth Pluto; James B. Olson, Po. 307; T. I. Jones, Po. 1448, and Martin A. Oberlander, Po. 2520.

Badge

G. E. N. Hines, Po. 16222.

Publicity

H. E. Cleland, Po. 18656.

Hotel

F. E. Watts, Po. 1509-7, Past Jupiter Eleven; W. C. Chapman, Po. 9851; C. L. Hight, Po. 1163; A. S. DeVeau, Po. 453; L. C. Gilpin, Po. 452.

Quorum

James H. Betts, Po. 6765V, Fourteenth Vulcan; H. C. Sterling, Po. 11014; Harry W. Alexander, Po. 17191; G. E. Hines, Po. 18114; Elliott Reid, Po. 1208; F. H. Leggett, Po. 9379; F. S. Hartman, Po. 762; Robert M. Kirk, Po. 19248; Jos. F. Becker, Po. 1889; J. W. Jones, Po. 5018; J. Lloyd Prince, Po. 4263; Thomas Christenson, Po. 8631; S. H. M. Agens, Po. 456; H. C. Heidrich, Po. 14439; C. A. S. Howlet, Po. 279; C. M. Crofoot, Po. 1182; R. E. Russell, Po. 5561, and Wm. Gloekner, Po. 2370V, Fifteenth Pluto.

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THE FOLLOWING AMENDMENTS WERE ADOPTED BY THE ANNUAL CONVENTION IN THE FORM BELOW SHOWN:

(1) **Function of The Jovian Order.**—An amendment which shall provide that the function of The Jovian Order in its relation to local Leagues shall be more definitely defined than at present. This definite specification shall closely check with the following:

"That the organization shall retain its present status of an international, semi-fraternal, goodfellowship, constructive, development body, and shall be made up of a large membership representative of the personnel engaged in all branches of the electrical industry, and shall perform the definite function of guiding and co-ordinating the activities of local Leagues; it shall perform its major development work, its general activities, through those established Leagues."

(2) **Jovian Oath.**—An amendment providing that Section 2, Article XVI, of the Constitution shall not be operative with respect to the Jovian Oath until said Oath as at present embodied in the Ritual shall have been re-written by a committee appointed by the next Jupiter, and approved by Jupiter and Congress.

(3) **Chartered League Territory.**—An amendment providing that a member shall have the right to choose the League with which he shall be affiliated, regardless of whether or not such League shall have been assigned the district in which he resides.

(4) **Nomination and Election of Officers, Congress and Statesmen.**—

(NOTE.—The amendment offered by the Harmony Committee, as published in the September issue of The JOVIAN, was defeated and the following, offered by Past Jupiter Frank E. Watts, was adopted.)

An amendment providing that Congressmen and Statesmen shall be elected by the members of their respective districts and states at each meeting at which an election is held, in place of election at large, as at present; the procedure to be as follows:

First: Any Jovian in good standing may be a candidate for Congress in the district in which he resides, or where he gives his business address, providing he presents to the meeting at which an election is held not less than twenty-four hours before the election a petition signed by not less than one hundred members in good standing from the district from which he is a candidate.

Second: Any Jovian in good standing may be a candidate for Statesman from the state in which he resides providing he presents to the Convention or to Mercury a petition signed by not less than fifty members in good standing from that state not less than twenty-four hours prior to the time of the election.

Third: That in those states from which there are no members present at which an election is held, and the districts from which there may be no members present for the election of their respective candidates for Statesmen and Congressmen, that the convention at large shall elect such Statesmen and Congressmen.

(5) **Jupiter and Mercury.**—An amendment providing that the present method of nominating and electing Jupiter and Mercury shall be changed. The following procedure is suggested:

First: Jupiter and Mercury shall be nominated by a nominating committee composed of Reigning Jupiter as chairman, the three Jupiters who next preceded Reigning Jupiter and three Reigning Congressmen selected by Reigning Jupiter.

Second: Nominations for Jupiter and Mercury shall be in the hands of Mercury not later than August first and shall be published in all issues of The JOVIAN magazine, mailed between the time of receipt by Mercury and the time of the next Annual Convention.

Sub-Amendment:

Except that candidates for the offices of Jupiter and Mercury may be nominated by a petition signed by not less than fifty (50) members of the Order in good standing in attendance at the Annual Convention of the Order.

Third: Jupiter and Mercury shall be elected at the Annual Convention.

Fourth: The present method of amending the Constitution and for other convention purposes shall obtain except that no one delegate shall have the power to cast more than fifty votes.

Fifth: Jupiter and Mercury shall be introduced to the delegates of the Annual Convention in the same manner provided for Congressmen and Statesmen.

(6) **Officers' Terms of Office.**—An amendment providing that all officers, regardless of their time of election or appointment, shall hold office until January first, in order that the newly elected Jupiter, Mercury, Congress, Statesmen, etc., may have sufficient time between the date of their election and the date of this installation in office, to plan their organization and activity.

(7) **Meetings of Congress.**—An amendment providing that Congress shall be required to meet for the purpose of promoting the affairs of the Order at each Annual and Special Convention of the Order, regardless of other meetings which it may hold.

(8) **Authority of Congress.**—An amendment providing that Congress, in addition to their duties as district officers, shall constitute for Jupiter and Mercury an advisory board on matters relating to the entire membership and territory of the Order.

(9) (The amendment relative to Past Jupiters' Association was defeated with but one dissenting vote.)

(10) **Distribution of Dues.**—An amendment providing that the present distribution of Jovian dues collected by chartered Leagues be changed so that the portion sent to the Jovian Central Office (at present $3.50 out of $4.00) shall be $2.00, the Leagues therefore retaining $2.00. The provision in the existing Constitution shall obtain in that ruling which permits local Leagues, within their discretion, to establish the total amount of dues and initiation fee paid their local organization.

(11) **Initiation Fee to The Jovian Order.**—An amendment providing that, in order to allow non-Jovian Leagues to charter as at present organized, and to rapidly bring into the Order their entire membership, the initiation fee to The Jovian Order be waived from October 24, 1917, to February 1, 1918; that on and after the last named date the initiation fee shall be $5.00, one-half to be retained by the local Jovian organization holding the initiation and the balance remitted to the Central Office.

(12) **Central Office Expense.**—An amendment providing that the practice of furnishing buttons to new members without cost to such member shall be discontinued.

An amendment providing that the cash prizes given for Degree Team competition at the Annual Meeting shall be discontinued.

An amendment providing that the amount paid into the Past Jupiters' Endowment Fund each year shall be determined until October 16, 1920, on a basis of one-tenth of one per cent, in place of the present basis of two and a half per cent of the gross receipts of the Order; that on the date mentioned it shall be returned to the present basis.

An amendment providing that the practice of furnishing free costumes and paraphernalia be discontinued, and the outfits at present owned by the Order be sold to the highest Jovian bidders.

(13) **Mercury's Compensation.**—An amendment providing that the present method of establishing Mercury's compensation shall be changed so that Mercury's compensation shall be fixed each year by the nominating committee, as previously defined.

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A USEFUL SOUVENIR

ONE OF the most useful souvenirs given away recently is a neat little chainlette keyholder presented to Jovian Insurance policyholders by the Utilities Indemnity Corporation. Not only does the chainlette make a good keyholder, but there is a little metal tag attached to each one bearing the holder's Jovian Potential. As the potential is recorded in connection with its owner's name and address in the company's office it readily acts as an identification tag in case the keys are lost, or to identify the member in case of injury.

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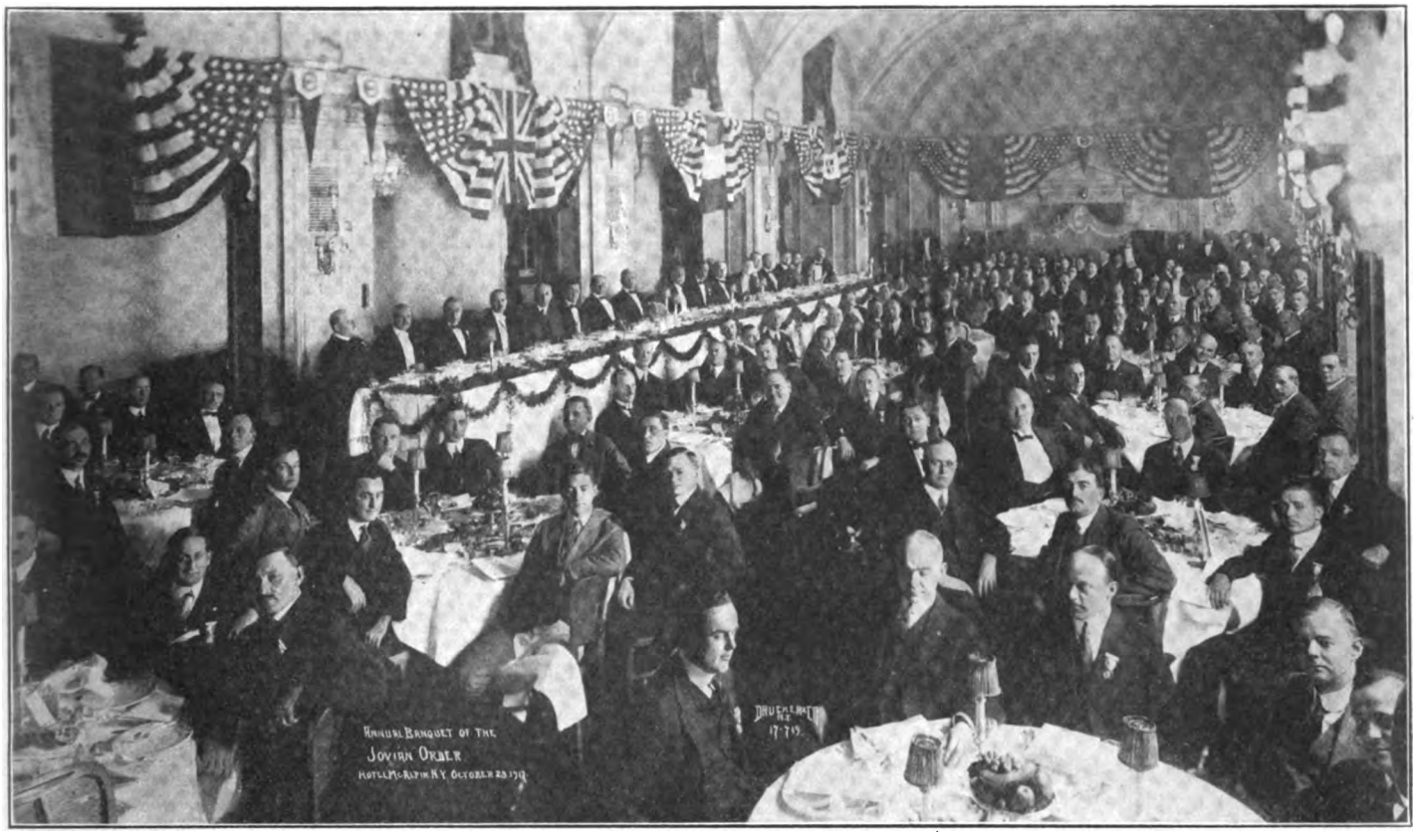
A SECTION OF THE BANQUET AT THE NEW YORK CONVENTION



THAT the photographer fired his shot prematurely at the banquet held on the evening of October 23, in the Hotel McAlpin at the Jovian Convention, is evident from the fact that Jupiter Doherty had not reached the seat at the center of the speaker's table that he occupied a few moments later. It is also apparent that his range was not the best as he only snapped a section of the big banquet. However, the picture will convey a good idea of what the banquet really was.

The following letter written to Jupiter Doherty by Edward N. Hurley, chairman of the United States Shipping Board, illustrates the esteem with which the work being done by the Jovian Order is held by men outside of the organization who are in a position to know.

MR. HENRY L. DOHERTY, No. 60 Wall Street, New York City.

Dear Mr. Doherty:—I thank you very much for your kind favor of September 26. There is no organization I would rather address than the Sons of Jove. We speak the same language, and I am keenly interested in their work. They have accomplished more for the electrical industry than any similar group of men have ever accomplished for any other industry, and they should be congratulated not only for their work but on account of the unassuming spirit of good-fellowship that prevails throughout the entire organization. Co-operative methods of this kind are doubly effective in building up the great electrical industry which is only in its infancy. With kind personal regards, believe me,

Yours sincerely,

(Signed) EDWARD N. HURLEY, Chairman.

CONDITIONS AFFECTED BY WAR

The President has approved the location at Sheffield, Ala., for the erection of the initial ammonia and nitric acid plant to be constructed with a portion of the $20,000,000 appropriated for nitrate supply by the national defense act, provided a suitable site be obtainable at a reasonable price.

Sheffield, Ala., is located on the Tennessee River just below Mussel Shoals and is near the phosphate beds of Central Tennessee.

* * * *

The requisition made by the United States Shipping Board, October 12, affects steam vessels of 2,500 tons capacity and over. Included in the requisition are all cargo ships capable of carrying 2,500 tons; passenger steamers of 2,500 tons gross register. Requisitions became effective October 15, or as soon thereafter as cargoes were unloaded in American ports by vessels on voyages.

The Food Administration modified its recent order prohibiting the sale of sugar to manufacturers and confectioners by advising refiners and distributors to deliver to them such quantities as, when combined with their stock on hand, will amount to 50 per cent of their normal requirements. This restriction to be in force until January 1, 1918.

* * * *

Imports of raw materials for the fiscal year of 1917, totaled $1,109,655,640, passing the billion-dollar mark for the first time in the history of the country. The raw materials now imported in the greatest quantities are hides, India rubber, raw silk, wool, raw cotton, copper ore and flaxseed. Important increases are also recorded in fur skins, gums, mineral oils, uncut diamonds, manganese ore, nickel ore, zinc ore and dyewoods.

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NEWS OF JOVIAN LEAGUES

Los Angeles Theodore C. Stevens, member of the firm of Hammond, Stevens & Company, addressed the Los Angeles League on "The Urgency of the Liberty Loan," at the luncheon meeting of October 10. C. D. LaMoree, presided as chairman.

October 24 was Liberty Loan day, and the occasion for a big demonstration.

* * * *

Memphis On the evening of October 18, members of the Jovian League of Memphis held a dinner at the Gayosa Hotel. W. R. Herstein, Po. 765V, Thirteenth Avrenim, presided. The principal address of the occasion was delivered by Dr. W. D. Buckner, who took for his subject, "The Liberty Bond Sale." After his address the speaker stated that he would be greatly pleased if the members of the League would be responsible for the sale of $25,000 worth of bonds.

Following addresses by J. F. Ramier, Po. 10604, H. L. Browne, C. K. Chapin, Po. 10600, and Wm. Slater, Po. 6667, a canvas was made and the members present subscribed $50,000 to the loan.

* * * *

Winnipeg Winnipeg Jovians resumed their bi-weekly luncheons September 27. The election of officers for the ensuing year was held October 11, and resulted as follows: President, J. H. Schumacher, Po. 4742; vice-president, W. G. Vogan, Po. 15974; secretary-treasurer, C. T. Kummen, Po. 15957; executive committee, E. F. Minty, F. B. Kennedy, J. S. Henry, Po. 5994, and L. R. Baker, Po. 12849.

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Pittsburgh The Annual meeting of the Pittsburgh Jovian League was held at the Seventh Avenue Hotel on the evening of October 4. President Wm. L. DeCoursey, Po. 7700, presided.

The following officers were elected for the ensuing year: President, Milton W. Cooke; vice-president, Barton R. Shover; trustee, Arthur G. Pierce, Po. 2896; first tribune, W. L. Fader, Po. 2883; second tribune, D. Paul Lockard, Po. 5788.

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Dallas Fred M. Lege, Po. 131, vice-president and general manager of the Dallas Power & Light Company, was the principal speaker at the luncheon meeting of the Dallas League, October 15, taking for his subject, "The Dallas Electric Club and Jovian League as a Factor in the Progress of Dallas." Adam H. Davidson addressed the League on the "Buy a Home Movement."

Appointment of chairmen of the following committees was made: Hartwell Jalonick, Po. 1255, Program and Entertainment; E. N. Willis, Po. 6026, Publicity; F. J. Farrell, Steering; Thomas Hunter, Po. 6015, Membership, and Guy Martin, Acting Secretary-Treasurer.

* * * *

New York Speakers at the luncheon meeting of the New York League, October 10, were Robert Adamson, fire commissioner of the City of New York, and Judge William L. Ransom, chief counsel of the First District Public Service Commission.

The New York League was host to delegates and visitors at the Annual convention of the Jovian Order at a luncheon October 22, and at a banquet on the evening of October 23.

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Chicago Ernest Palmer, a well known Chicago attorney, was the speaker at the luncheon meeting of the League October 4. In addition a short motion picture entitled, "The Unbeliever Convinced," was shown. At the meeting of October 11, E. W. Lloyd, assistant secretary, State Counsel of Defense, explained the activities of that organization to a large attendance.

Professor Frederick S. Deibler, Ph.D., of Northwestern University, made an interesting address before the League October 18, on the subject of "Profits." Professor Deibler is a practical economic student whose services are in much demand. In his analysis he stated that "frequent misunderstandings as to what constitutes real profits result from a failure to apply sound economic principles in the calculations of the profit."

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Cleveland Rev. H. C. Martindale addressed the League, September 27, taking for his subject, "The World War."

October 4 was Special Liberty Bond meeting. Dr. Elliott A. Boyle, of Scranton, Pa., addressed the meeting on "Patriotism." F. C. Foster, Po. 3398, presided as chairman of the meeting and made an inspiring address on "The Liberty Bond Workers." Retiring president of the League, J. M. Bateman, Po. 2610V, made a farewell talk at the meeting of October 11. He was followed by Norman Anderson, Po. 19044, the new president, in an address in which he outlined that his administration to be successful would require the support and co-operation of all the members of the League.

October 25, A. P. Sanders addressed the League on "Food Conservation and Production Methods." Other speakers at the meeting were: Col. R. B. Hamilton, lately in command of the Queen's Own Rifles of Toronto, and W. D. Taylor, president of the George Worthington Company.

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St. Louis Charles A. Dostal presided as chairman of the luncheon meeting of the St. Louis League, October 9, introducing as speaker E. Gengenbach, industrial commissioner of the St. Louis Chamber of Commerce, who pointed out some of the many industrial opportunities of St. Louis.

At the meeting of October 16, E. S. Jones, of the New York, New Haven & Hartford R. R. spoke on "The Beauties and History of New England."

The attendance enjoyed two interesting addresses October 23. Festus J. Wade, capitalist, spoke on "The Liberty Loan," and Jos. P. Taylor, in charge of the British and Canadian recruiting station, addressed the League on "Patriotism."

One of the most inspiring addresses of the season was delivered by E. Leslie Pidgeon, of Winnipeg, Man., president of the International Association of Rotary Clubs, before a joint luncheon meeting of the Jovian League and the Rotary Club October 30. Mr. Pidgeon very plainly emphasized the value of the slogan of the Rotary organization, which is, "He Profits Best Who Serves Most."

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EIGHT WAYS TO SAVE GASOLINE

Automobile clubs are getting after the "gasoline slacker," and the following eight rules have been prepared for the guidance of motorists who wish to be economical, by Mancius S. Hutton, laboratory engineer of the Automobile Club of America:

1. Do not allow the engine to run idle, except when absolutely necessary.
2. Run the car on a lean mixture.
3. Prevent leaks in the gasoline line, and shut off gasoline at the tank whenever possible.
4. Keep the motor free of carbon. A carbonized motor is a large consumer of fuel.
5. Change gears more frequently in order to run the engine at high, economical and efficient speed.
6. Keep the moving parts well lubricated.
7. Keep the tires properly inflated.
8. Use kerosene for cleaning instead of gasoline.

—The Weekly Bulletin.

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Personal Pointers

The years glide by all unobserved
Until some word, or deed, or face,
Lights memories long undisturbed
That mark the progress of life's race,
And glancing back along the way,
In momentary pause to sum
The mile-stones that behind us lay,
We note the distance we have come.

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MORGAN T. COAKLEY, Po. 16870, of the Robertson Cataract Electric Company, Buffalo, N. Y., is now a lieutenant in the engineers' section of the Officers' Reserve Corps.

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M. S. ORRICK, Po. 5886, formerly city sales manager of the Western Electric Company, at San Francisco, has been made assistant manager of the company's branch in that city.

* * * *

M. S. SLOAN, Po. 2700, has resigned as vice-president and general manager of the New Orleans Railway & Light Company to accept a position with the New York Edison Company.

* * * *

F. W. HALL, Po. 3520, of the Sprague Electric Works of the General Electric Company, has been elected secretary of the fan section of the Associated Manufacturers of Electrical Supplies.

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J. F. MCGUIRE, Po. 3603, has been elected a member of the board of directors of the Northern States Power Company. Jovian McGuire is manager of the Minot, N. D., division of the company.

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S. T. HONEY, Po. 5369, formerly with the Central Electric Supply Company of New York, is now manager of the New York City office Lindstrom-Smith Company, located at 396 Broadway.

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H. E. YOUNG, Po. 8242, sales manager of the Minneapolis General Electric Company, was appointed chairman of the Liberty Loan Committee of the county districts adjacent to Glencoe and Hutchison.

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W. E. BLACKWELL, Po. 6857, is now chief of the electrical department of the Southern Oil Corporation at Yale, Oklahoma. He was formerly superintendent of the municipal light and water plant at Afton, Okla.

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NORMAN F. OBRIGHT, Po. 18794, formerly associate editor of the Western Electrician, and later sales engineer for the Commonwealth Edison Company of Chicago was married to Miss Jeannette M. Bauer, October 20.

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C. O. DUNTON, Po. 14602, formerly connected with the sales department of the General Electric Company, is now in charge of the commercial department of the Central Illinois Public Service Company at Mattoon, Ill.

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ARTHUR WILLIAMS, Po. 1917, general inspector for the New York Edison Company and president of the New York City Jovian League, has been appointed chairman of the Food Conservation Campaign of New York City.

* * * *

M. G. SELLERS, Po. 3740, is secretary of the newly organized Credit Association of the Building Trades, of Philadelphia, and R. C. WILLIAMS, JR., Po. 2256, is the member of the executive committee in charge of electric work.

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R. S. DUNNING, Po. 16471, secretary of the Cleveland Electric Club and Jovian League, is receiving congratulations from friends and members of the League on the arrival of a little daughter at his domicile.

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HARVEY B. WHEELER, Po. 11033, of Kansas City, Mo., has been appointed supervising engineer for the National X-Ray Reflector Company, of Chicago, with headquarters at 120 West Eleventh St., Kansas City.

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ALFRED J. HIXON, Po. 1977, of the Hixon Electric Company, Boston, was elected president of the Electrical Contractors' Association, of Massachusetts, at the recent convention of that organization held at Worcester.

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FRANK ESPY, Po. 18608, has been made assistant general manager of the American Gas & Electric Company of New York City, having been transferred from the Ohio Light & Power Company of which he was general manager.

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THOMAS F. KELLY, Po. 1953, has been elected a director of the Greater Dayton Association, and is one of the three representatives of its commercial division. He is commercial manager of the Dayton (Ohio) Power & Light Company.

J. M. BATEMAN, Po. 2610V, who, after about ten years' service with the Western Electric Company, has resigned to engage in the ice cream business, and is now connected with the Arctic Ice Cream Company, of Detroit, as sales manager. Jovian Bateman's first connection with the Western Electric Company was as salesman, traveling for the Chicago branch. Later he went to Omaha as sales manager, and from there was promoted to the management of the Cleveland branch, which became very successful under his supervision. Since his affiliation with the Order Jovian Bateman has been one of its most loyal supporters and enthusiastic promoters. He has a host of friends in the fraternity who regret seeing him leave the electrical industry, but who extend their best wishes for his success in his new venture. May the whirr of your freezers be heard throughout the land, Jim.

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W. J. DRURY, Po. 7677, sales manager of the Dallas, Texas, branch of the Western Electric Company, has been promoted to the management of the Cleveland branch of the company to succeed J. M. BATEMAN, Po. 2610V, resigned.

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H. P. HESS, Po. 4981, formerly connected with the Houston office of the Western Electric Company, has been made sales manager of the Dallas branch of that company to succeed W. J. DRURY, Po. 76677, transferred to Cleveland.

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ELBERT F. NORTON, Po. 17513, sales engineer for the Standard Underground Cable Company, at Chicago, has been commissioned a major in the Engineers' Reserve Corps, United States Army, and is in training at Fort Leavenworth, Kan.

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SUB-FLIGHT LIEUT. R. D. SMITH, Po. 10855, has returned to his home in Winnipeg for a much needed rest. He was connected with the Royal Air Service on the Western Front. After he has recuperated Jovian Smith will return to service.

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P. T. DAVIES, Po. 8818, has resigned as manager of the power sales department of the Montreal (Que.) Light, Heat & Power Company to become manager of the new-business department of the Southern Canada Power Company, of Montreal.

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F. I. WOLTZ, Po. 3833, formerly connected with the power sales department of the Union Gas & Electric Company, Cincinnati, Ohio, is now power engineer, in charge of power sales for the Central Hudson Gas & Electric Co., Poughkeepsie, N. Y.

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A. F. CHAMBERLAIN, Po. 17194, manager of the New York City branch of Robbins & Myers Company, who has been secretary of the fan section of the Associated Manufacturers of Electrical Supplies, was recently elected chairman of that organization.

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CLOYD HUNT, Po. 13356, has been appointed manager of the newly created Southwestern division of the Northern States Power Company, with headquarters at Montevideo, Minn. He was formerly associated with the Minneapolis General Electric Company.

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E. H. SMITH, Po. 4391, president of the Winnipeg Jovian League during the past year, who is connected with the Canadian Westinghouse Company, as sales engineer, has been promoted to the managership of the Winnipeg branch of the Canadian Westinghouse Company, Ltd.

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W. O. DAHLSTROM, Po. 17366, has formed a partnership with E. H. Dicker, under the firm name of the Luminous Fixture & Supply Company, and has opened offices at 108 S. La Salle St., Chicago. Jovian Dahlstrom was formerly with the Inland Electric Company.

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J. F. BRATNEY, Po. 17779, until recently general commercial superintendent, Missouri & Kansas Telephone Company, at Kansas City, is now assistant to the second vice-president of the Southwestern Bell Telephone System, with headquarters at 658 Boatman's Bank Building, St. Louis.

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SIDNEY G. VIGO, Po. 11027, formerly in charge of the commercial work of the Middle West Utilities Company, Chicago, is now assistant to the vice-president of the American Public Service Company, in charge of operation, commercial and other departments, with headquarters at Dallas, Texas.

J. F. KIDD, Po. 3233, is now manager of the commercial car department of the Webber Motor Car Company, St. Louis, distributors of the Studebaker. Jovian Kidd was formerly connected with the Industrial Power Department of the Union Electric Light & Power Company of that city.

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W. A. THOMAS, Po. 6414, consulting electrical engineer, Scranton, Pa., is now vice-president of the Carbon Creek Coal Company, of Scranton. He was formerly in charge of the mining division of the industrial sales department of the Westinghouse Electric & Manufacturing Company, at East Pittsburgh.

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A. M. BALDWIN, JR., Po. 6028, formerly salesman for the Northwestern Electric Equipment Company, of St. Paul, has been made manager of the branch recently opened by that company at Duluth. Jovian Baldwin has represented the company in Central Minnesota, North Dakota and Montana for the past twelve years.

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LIEUT. THOS. CARLYLE, Po. 5055, of Winnipeg, who has been on the Western Battle front, has just recovered from serious wounds and returned home. Jovian Carlyle participated in a number of important battles, during his two years service. After being wounded he spent several months in hospitals in France and England before recovering sufficiently to be sent home. He was a guest of honor at a recent meeting of the Winnipeg League.

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ROY B. WOOLLEY, Po. 19626, formerly sales and advertising manager for the Standard Electric Stove Company, Toledo, Ohio, and late of the American Ambulance Field Service, at the Verdun front in France, has served his enlistment and returned to America. He is now with the Society for Electrical Development, New York, as an executive of its advertising department. Jovian Woolley was with the McManus-Kelley Advertising Agency for a number of years.

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GUY W. TALBOT, Po. 6752, was elected president of the Northwest Electric Light & Power Association at its recent annual convention held at Spokane, Wash. Jovian Talbot is president of the Pacific Power & Light Company, of Portland, Ore. He is 44 years of age, and has had an extensive experience in railway work, having served as traveling passenger agent and traveling freight agent and as general manager and vice-president of various systems. He has held the position as president and director of the Pacific Power & Light Company, The Portland Gas & Coke Company and the Walla Walla Valley Railway Company since 1910.

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JOHN HUNTER, Po. 7016, chief engineer for the Union Electric Light & Power Company, has been appointed district manager of the Emergency Fleet Corporation, and will have supervision over the building of fifty 5000-ton steel freighters and 77 transports of 9,500 tons each. Jovian Hunter was appointed after a recent conference at Washington, and will be one of five district managers under Rear Admiral Bowles, general manager of the corporation. The ship yards will be at different points along the Atlantic seaboard, and Jovian Hunter will make his headquarters in New York City. He has had a wide experience in ship-building, having been connected with the Clyde Shipyards of Scotland, later serving as engineer at sea. He had supervision over the building of the Red Star Line steamers, the St. Louis and St. Paul, and served on the latter as chief engineer during the Spanish-American war. Coming to St. Louis in 1905 he took charge of the Union Electric Company's extensions, and has been affiliated with the company as chief engineer since that time.

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WALTER ROBBINS, Po. 1169V, assistant general manager of the Wagner Electric Manufacturing Company, of St. Louis, Mo., has received an appointment on the War Industries' Board, and is now in Washington, where he will make his headquarters. Jovian Robbins will act in the capacity of assistant to Robert S. Brookings, and will have supervision over the purchase of electrical supplies and apparatus.

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SAM A. HOBSON, Po. 3V, Past Jupiter Three, who has been western manager for the Electrical World for the past five years, has resigned, effective January 1, 1918, and is planning to re-enter the electrical merchandising field. Past Jupiter Hobson has had an extensive experience in the electrical industry. His first connection with it was with the Wyatt Park Street Railway Company of St. Joseph, Mo. He later superintended the building and operation of the Electric Light & Railway Company of Waco, Texas, the Electric Railway Company of Atlanta, Ga., and the Electric Light & Power Company of San Antonio, Texas. Later he engaged in the electrical contracting business at Waco and Austin, and was sales manager for the Hobson Electric Company of Dallas, Texas, for a number of years, going with the Electrical World in 1912. Past Jupiter Hobson is one of the three founders of the Jovian Order, and from the day it was organized until the present there has been no period during which his interest and activity in behalf of the fraternity has lapsed, and in which his constructive influence in promoting it has not been felt. It would be a difficult task to find another man with as large an acquaintance in the country as Jovian Hobson, or one with as large a percentage of real friends among his acquaintances. The JOVIAN extends its hearty wish for his success in whatever line he may decide to take up.

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OBITUARY

H. H. BENJAMIN, Po. 17633, died at St. Mary's Hospital in Evansville, Ind., October 9, of heart disease, after a short illness. He was in the employ of the Varney Electrical Supply Company, of Indianapolis, Ind., having been connected with that firm but a few months. Previously he was with Edward and James Grewar, electrical contractors of Nashville, Tenn. He leaves a wife and one small son to whom The JOVIAN extends the sympathy and condolences of the fraternity.

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SCOPE OF N. E. C. A. BROADENED AT CONVENTION

THE scope of the National Electrical Contractors Association was broadened and the name of the organization changed to include retailers and distributors at its annual convention held in New Orleans, October 8 to 13.

Henceforth the name of the association will be National Association of Electrical Contractors and Dealers, with the object as set forth to include "A more representative membership of contractors and dealers." The reorganization also provides for an associate membership of persons, firms or corporations who sell electrical goods at retail as a department or minor part of their business.

The committee on revision of the constitution was composed of J. R. Strong, Po. 742-4, New York; Wm. L. Goodwin, Po. 1038, San Francisco, and Ernest McCleary, Po. 7314V, Detroit.

Robley S. Stearnes, Po. 1501, Thirteenth Apollo, continues as president of the association, and other officers and committees will continue in office until the new executive committee is formed. The new committee will then appoint its own national chairman and other officers for the year.

Special state committee chairmen on permanent organization were appointed under three division chairmen, who are: Jas. R. Strong, Po. 742-4, New York, for the Atlantic Division; Ernest McCleary, Po. 7314V, Detroit, Central Division, and H. C. Reid, Po. 9403, San Francisco, Pacific Division.

The state chairmen are: Alabama, J. R. Wilcox, Po. 2705; Arkansas, C. G. Rush, Po. 2678; California, W. D. Kahlwey; Connecticut, G. M. Chapman; Georgia, T. H. McKinney, Po. 4473; Illinois, J. N. Pierce, Po. 1598; Indiana, A. L. Swanson, Po. 5923; Iowa, J. E. Sweeney, Po. 6568; Kansas, R. M. Sutton, Po. 15859; Kentucky, C. C. Childers, Po. 15954; Louisiana, C. Sam Barnes, Po. 1492; Massachusetts, A. J. Hixon. Po. 1977; Michigan, J. J. Thorne; Minnesota, W. I. Gray, Po. 8975; Missouri, Fred B. Adam, Po. 242; Nebraska, James Corr, Po. 1388; New Jersey, Paul H. Jaehnig, Po. 12992; New York, J. J. O'Leary, Po. 588; Ohio, F. C. Werk, Po. 5662; Oregon, J. R. Tomlinson; Pennsylvania, Albert Gentel, Po. 2769; Tennessee, J. A. Fowler, Po. 3283; Texas, W. M. Clower, Po. 51; Virginia, E. G. Andrews; Wisconsin, George F. Rohm, Po. 7370; Washington, J. F. NePaige, Po. 5733.

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INDIANA ELECTRIC LIGHT ASSOCIATION ANNUAL MEETING

AT THE annual meeting of the Indiana Electric Light Association, held September 26, at the Claypool Hotel, in Indianapolis, discussion was confined almost entirely to timely questions brought about by the war.

Among other business transacted the executive committee of the association was instructed to give careful attention to the coal problem, and a special agent was appointed for that purpose.

Officers elected were: President, J. P. Ohmer, Elkhart; vice-president, Thos. A. Wynne, Po. 11457V, Past Jupiter Fourteen, Indianapolis; secretary-treasurer, Thomas Donohue, Lafayette.

Members of the executive committee: S. W. Greenland, Po. 6161, Fort Wayne; E. J. Condon, Po. 17359, Angola; E. F. Hass, Evansville; P. H. Palmer, Po. 13558, Kokomo, and C. C. Perry, Po. 12577, Indianapolis.

The advisory committee: J. W. Robb, Po. 11450, Clinton; H. H. Harrison, Indianapolis, and Thomas F. English, Po. 13495, Muncie.

* * * *

AN APPEAL TO THE AMERICAN PEOPLE

THE WHITE HOUSE, Washington.

One year ago, in compliance with resolutions passed by the Senate and by the House of Representatives, I appointed days upon which the people of the United States might make such contributions as they felt disposed for the aid of the stricken Armenian and Syrian peoples.

American diplomatic and consular representatives and other American residents recently returned from Western Asia, assure me that many thousands of lives were saved from starvation by the gifts of the American people last winter. They also bring full assurance of the continued effective distribution of relief and report that the suffering and death from exposure and starvation will inevitably be very much greater this winter than last unless the survivors can be helped by further contributions from America.

Reports indicate that of orphans alone there are more than 400,000, besides women and other dependent children, reaching a total of more than 2,000,000 destitute survivors. The situation is so distressing as to make a special appeal to the sympathies of all.

In view of the urgent need, I call again upon the people of the United States to make such further contributions as they feel disposed; in their sympathy and generosity for the aid of these suffering peoples. Contributions may be made through the American Red Cross, Washington, D. C., or direct to the American Committee for Armenian and Syrian Relief, Cleveland H. Dodge, treasurer, 1 Madison Avenue, New York City.

WOODROW WILSON.

October 29, 1917. —Official Bulletin.

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SAVED O

ON HIS ACCIDENT

ONE JOVIAN WRITES IN PRAISE

FOUND IN THE JOVIAN IN

"MY former policy, costing me $25 per year, written originally for $5,000, had increased 5% annually until its principal sum had amounted to $7,500, doubling to $15,000 in case of accidental death on a common carrier. The $25 weekly indemnity also doubled to $50 in case the totally disabling accident occurred on a train, etc.

"At a cost of $24 per yea
policy I consider I saved mor

He is correct and one of man
this plan and enthusiastically
alyze it, the better it looks.

Clip and Mail the Coupon Today

IF YOU SO DESIRE, DATE YOUR APPLICATION TO TAKE EFFECT WHEN SOME OF YOUR PRESENT INSURANCE EXPIRES — PAY NOT UNTIL YOU RECEIVE THE POLICY.

THE JOV

SYNDICATE TRUST BUI

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NE-THIRD

NSURANCE ALONE

DF THE BETTER VALUE HE HAS

URANCE FOR LESS MONEY

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

The Lady Missed Me

By W. R. J.

Lady in your limousine,
Winding whither in between
All the traffic of the street,
Trucks and flivvers, trolleys fleet;
Winding ways to rules unknown,
Causing Fate to weep and moan,
Causing folks to jump about,
As you wander in and out;
On the sheltered curb I stand,
Hat and kerchief both in hand,
Feeling like a refugee
Just escaped catastrophe,
In the shell-torn town of Trieste,
Very thankful that you missed me.

Lady, it is sometimes meet
That I cross the crowded street,
Whether it be choice or not,
Such is a pedestrian's lot.
Men have tried to regulate
Traffic by the laws of state
Where congested throngs are rife,
To conserve both limb and life;
But you certainly nonplus
Both the laws we make and us.
When you start to knit tonight,
If you should recall your flight
And among your chances list me,
Set your mind at ease—you missed me.

* * * *

Essays on the Significance of Words

OBLOQUY

I'll make a prediction right now you don't know what "Obloquy" means; I didn't until I fell over it in the dictionary. If some fellow had sprung it on me before I discovered it nestling in the archives of Mr. Webster, I would have returned him the high sign of the Royal Bengallites, or have recommended a good throat specialist.

Try it once out loud and see if it doesn't sound like a password or a gurgle. Be careful though, and don't let your tongue get out of control. If it gets in that kind of a knot you will never be able to speak anything but Chinese or maybe a little of the Sioux Indian dialect ever after.

Aside from the effect it has on the articulating organs, there are underlying reasons why "Obloquy" has never been popularized. The human race has a superfluous amount of the kind of language it represents without having to risk short-circuiting the tonsils when generating a "bawling-out."

However, in cases of emergency it might be used in rebuttal and sprung as a surprise in self-defense to good effect.

Suppose at a time when wifie was "reading the riot act" to you, and had reached a point where it was absolutely necessary to recuperate respiration, that you should take advantage of the opportunity to say: "My dear (or whatever qualifying adjective was appropriate), do you really think the occasion demands the use of so much obloquy?" Don't you think it might make her temporarily forget you had come home late, or had forgotten the cake of beeswax, or failed to take all the poker chips out of your pocket?

She might either imagine she had said something out of the ordinary, and pause to think what it was, or the word might convey the impression that you had lost your mind (whether she thought you had one or not).

In either case the temporary cessation of vocal activity would enable you to suggest arbitration.

It might even work on your boss when he has you on the "carpet." But great care should be taken to have a copy of Webster's Manual handy to establish an alibi, or the boss may think you are trying to say a swear word to him in Pokanese.

In fact there are but two classes of people to whom the unrestricted use of the word is available, without any danger of creating the impression that they are unduly erratic. Nor would the free and unlimited use of it subject them to criticism because of vagueness of annunication. They are baseball umpires and railway conductors. No one knows what they are talking about anyway.

In case this explanation has not been perfectly clear to the reader, permission is granted to resort to the dictionary, but if you have ever been "bawled-out" neither Webster nor the encyclopedia can impart half as good a meaning of "Obloquy" as the experience.

* * * *

Tricks of Fate

By W. R. J.

There was a man of simple taste,
As long as he was poor
He was most careful not to waste
His means, nor wanted more.
But Fate unwound a freakish turn,
(She may try this on you)
And gave him coin enough to burn
To see what he would do.
And when he found he had the cash,
With all his main and might,
His simple habits went to crash
Ahd he was soon a fright.
When Fate observed he was so gay
As soon as he was rich,
She made him throw his coin away
And kicked him in the ditch.

* * * *

Worse Libre

By W. R. J.

I may not be thoroughly poetic,
Nor alert
To all the chords
That muses sing to give expression
To their glorious interpretations
Of nature and of art.
In fact I do not claim
To be such an adept treader
Of starry stairways that wind
In and out among the incandescents
Of the great poetical universe.
Gyrations and magic soul flights
Do not appeal to me
Unless the machine in which I ascend
Has a harmonious motor.
If it jerks and jars, sputs and whirrs
It makes me nervous.
I want to get out—get away from it.
Consequently this kind of verse
Reminds me of a rattling flivver.
Who started to write it anyway?
I'll bet the person
Was either troubled with boils,
Had dyspepsia or had compounded
A formula for rat-poison—
Brr—rr—rrrr—r—r and then some.

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PRACTICAL LESSONS IN ELECTRICITY

LESSON THIRTY-ONE

POWER AND POWER FACTOR IN ALTERNATING-CURRENT CIRCUITS

By TERRELL CROFT

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POWER in alternating-current circuits is determined by applying the same general laws which relate to direct-current circuits. The power in any electric circuit (a. c. or d. c.) is, at any instant, always equal, in watts, to the *current* at that

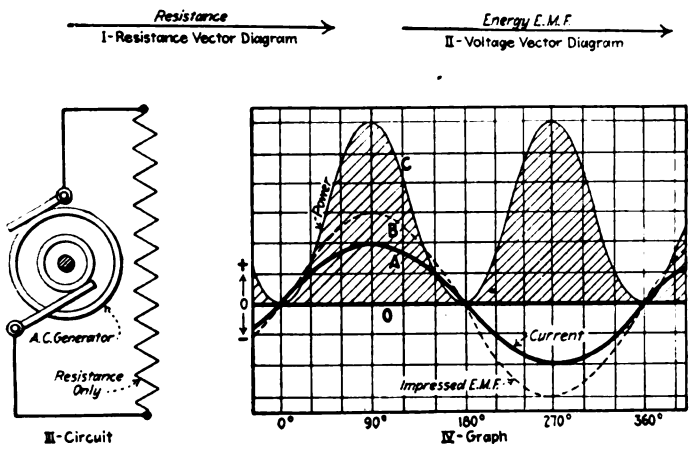


Fig. 1—Illustrating Conditions for 100 per cent Power Factor. Circuit Composed Wholly of Resistance and Current is in Phase with Impressed e.m.f.

instant multiplied by the *voltage* (at that instant) which impels the current. That is:—

(1) $$Pi = Ii \times Ei \qquad (watts)$$

Wherein.—Pi = instantaneous power of the circuit, in watts, at a given instant. Ii = instantaneous current in the circuit, in amperes, at the same instant. Ei = instantaneous voltage, in volts, at the same instant, it being understood that this E represents the available or energy voltage which actually impels the current at the given instant. In a direct-current circuit, containing no source of counter e.m.f. the voltage impressed on the circuit (except during the *transient* intervals) is the voltage which impels the current. In an alternating-current circuit, the voltage impressed on the circuit may or may not be the one which impels the current:—(1) If the circuit contains no inductance nor capacity, that is, if the current is in phase with the impressed e.m.f. the impressed voltage is the one which impels the current. (2) If the circuit contains inductance or permittance (capacity) or both, that is, if the current is not in phase with the impressed e.m.f., some voltage other than the impressed voltage will impel the current.

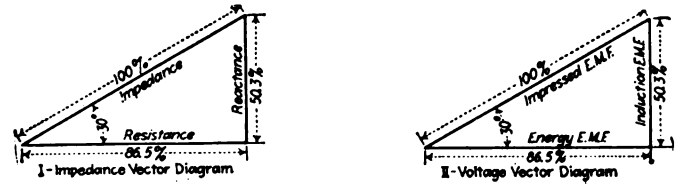
Power taken by an alternating-current circuit in which the current is in phase with the impressed e.m.f. (this condition obtains in a circuit containing resistance only) is equal to the product of:—*volts* × *amperes*. That is:—

(2) $$P = Ee \times Ie \qquad (watts)$$

(3) and $$Ee = \frac{P}{Ie} \qquad (volts)$$

(4) also $$Ie = \frac{P}{Ee} \qquad (amp.)$$

Wherein.—P = power taken by the circuit, in watts. Ee = e.m.f., effective, impressed on the circuit, in volts. Ie = current,



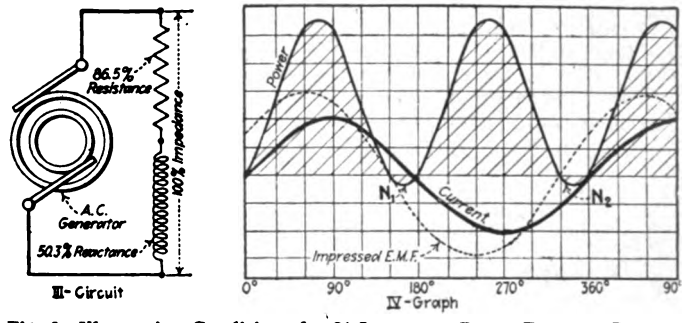


Fig. 3—Illustrating Conditions for 86.5 per cent Power Factor. Current Lags 30 Degrees Behind Impressed e.m.f.

effective, in the circuit in amp. Fig. 1 illustrates conditions in such a circuit. If the current at any instant, for example OA, be multiplied by the impressed e.m.f. (OB) at the same instant, their product (OC) will be the power at that instant. By making this computation for a number of different instants in the cycle, a corresponding number of points in the power curve may be obtained. The power curve can then be plotted through them as shown. The total power taken by the circuit during any alternation is proportional to the area (shaded in the illustration) within the power loop of that alternation.

NOTE.—All of each power loop will lie above the zero reference line—that is, the power will be positive—because when two + quantities or two — quantities are multiplied together the result

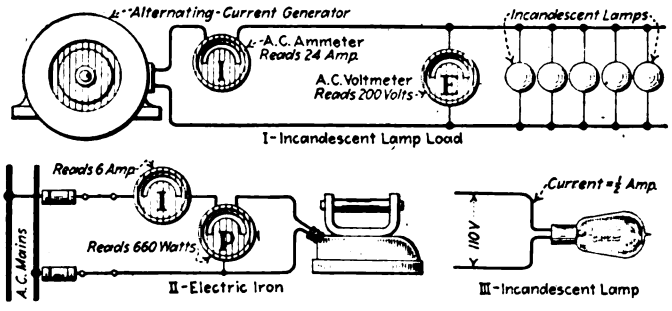


Fig. 2—Examples in Computing Alternating-Current Power and Power Factor

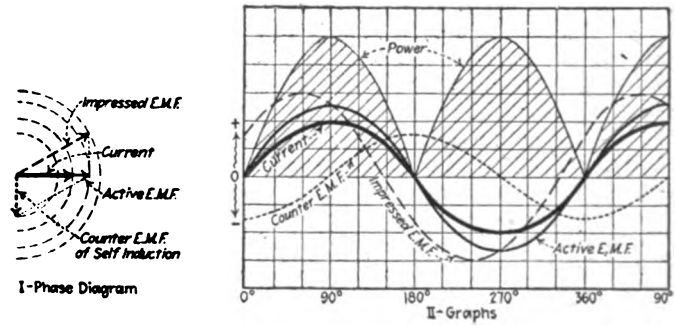


Fig. 4—Showing How A. C. Power is Proportional to the Product of Active or Energy e.m.f. and Current

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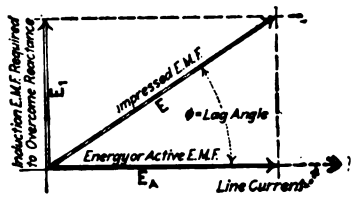

Fig. 5—Phase Diagram Showing Voltage Relations in an Inductive Circuit

will be a + quantity. By *positive power* is meant power which is delivered by the generator (or other source of e.m.f.) to the circuit. Sometimes a circuit may, as will be shown, deliver power back to the source of power which feeds it; such is called negative power.

EXAMPLE.—What power is being taken by the incandescent-lamp load of Fig. 2—*I* (all incandescent-lamp loads are practically non-inductive) which is being served by an alternating-current generator? The voltmeter reads 200 volts and the ammeter reads 24 amp. SOLUTION.—From the above:—$P = E \times I$, hence $P = 200 \times 24 = 4800$ *watts* or 4.8 *kw*. Therefore, the generator is delivering 4.8 kw.

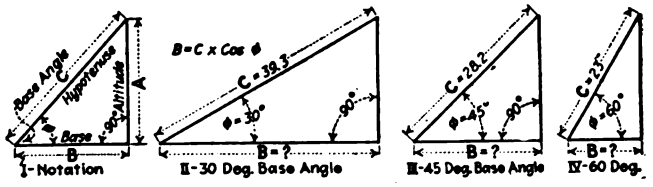

Fig. 6—The Cosine and Problems Involving its Application

EXAMPLE.—The alternating-current wattmeter of Fig. 2—*II* indicates that the non-inductive iron is taking 660 watts. The current, as shown by the ammeter, is 6 amp. What is the voltage impressed across the iron? SOLUTION.—As outlined above, $E = P \div I$, hence, $E = 660 \div 6 = 110$ *volts*, which is the pressure impelling the current in the iron.

EXAMPLE.—The incandescent lamp of Fig. 2—*III* is taking 0.5 amp. at 110 volts. What is its power consumption? SOLUTION.—$P = E \times I = 110 \times 0.5 = 55$ *watts*.

Power taken by an alternating-current circuit in which the current is not in phase with the impressed e.m.f. will not, as will be shown, be equal to the product of impressed *volts* × *amp*. In

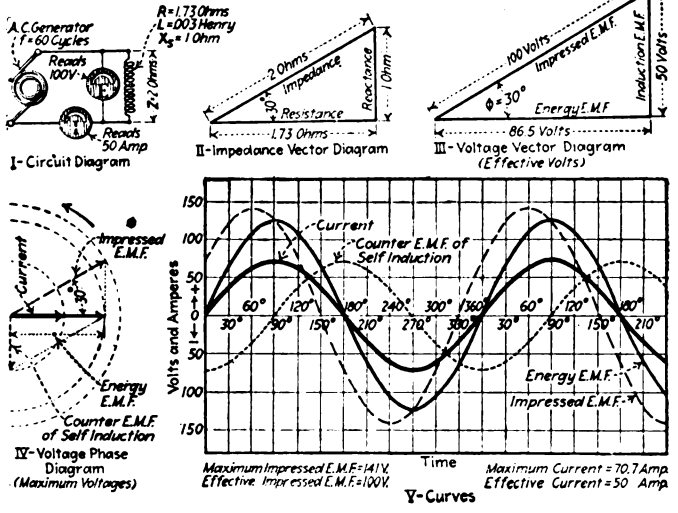

Fig. 7—Relations in Alternating-Current Circuit of 1.73 Ohm Resistance and 1 Ohm Reactance

any alternating-current circuit which contains inductance, and consequently reactance, the current lags behind the impressed e.m.f. Consider Fig. 3, illustrating conditions in a circuit which has just enough reactance that the current lags behind the impressed e.m.f. by 30 deg. If the instantaneous currents at the different instants are multiplied by the instantaneous e.m.fs. at the same instants and a power curve is plotted through points representing these products, it will have the form shown in *IV*. Note that a portion of the power curve N_1 and N_2 lies below the zero line, because when a + quantity is multiplied by a — quantity a — quantity results. The areas of these little loops (N_1 and N_2) represent *negative power* or power which is returned to the generator by the line, and hence is not available for doing work in the circuit. Note that no power is required to overcome reactance. The vector diagrams *I* and *II* show the voltage and resistance relations, the angle of lag being the same in these as

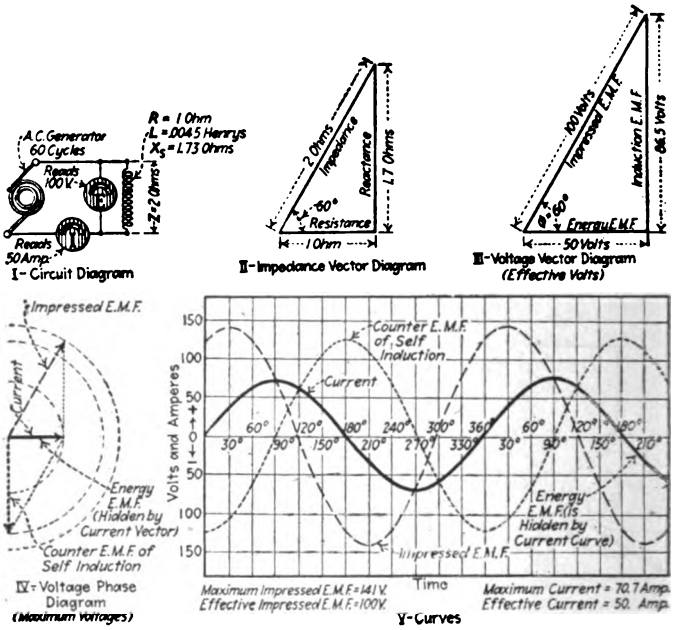

Fig. 8—Relations in an Alternating-Current Circuit of 1.7 Ohm Reactance and 1 Ohm Resistance

in the graph. It is evident then from a consideration of Fig. 3 that the power in an inductive alternating-current circuit is not equal to the product of *effective volts* × *effective amp.* because this product would not take into consideration the negative power (N_1 and N_2, Fig. 3) which is not available for doing work in the circuit.

The product of the active, available or energy e.m.f. times the current gives real power. Thus, in Fig. 4, if the instantaneous energy or active e.m.f. at different instants be multiplied by the instantaneous currents at different instants, the products will be the instantaneous power at those instants. Points can thus be determined through which the power curve can be completed as shown at *II*. The shaded areas within loops represent, and are proportional to, the power taken by the circuit because the cur-

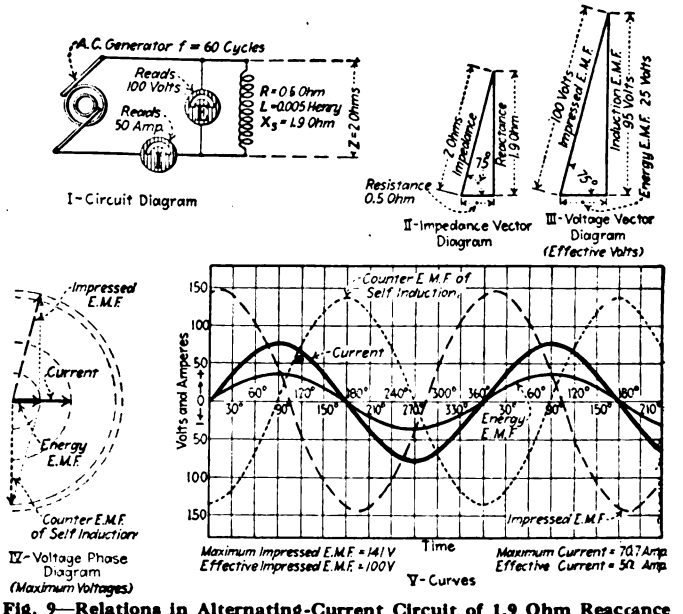

Fig. 9—Relations in Alternating-Current Circuit of 1.9 Ohm Reactance and 0.5 Ohm Resistance

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rent is always in phase with the energy or active e.m.f. The areas of the loops in Fig. 4—*II* are equal to the shaded areas above the reference line in Fig. 3.

NOTE.—Ordinarily in alternating-current circuits the value of the energy e.m.f. is not known; only the values of the impressed e.m.f. and the current are known. But with these two values,

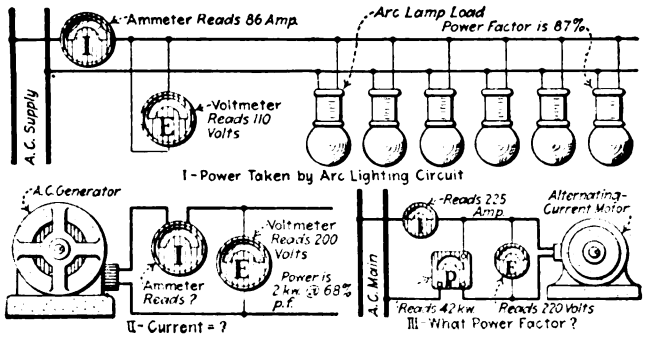

Fig. 10—Problems Involving Power Factor

and knowing the angle by which the current lags behind the impressed e.m.f., the power taken by the circuit can be readily computed, as will be shown.

The computation of the power taken by an inductive circuit may be made by using a vector diagram or a phase diagram, Fig. 5. The e.m.f. impressed on any inductive circuit is "used up" in two ways:—*First*, to impel the current in the circuit through its resistance and to force the current to do work; this part of the impressed e.m.f. represents actual power. *Second*, to overcome or neutralize the counter e.m.f. of induction in the circuit; this portion of the impressed e.m.f. does not represent actual power. Thus (Fig. 5) if E be laid out to scale to represent the effective e.m.f., it may be resolved into two components:—(1) An induction component E_1, which merely neutralizes the counter e.m.f. of self-induction and hence does no real work, and (2) the energy component E_A, which impels current through resistance and also does work. The energy component must be in phase with the current, hence lags behind the impressed e.m.f. E by the angle ϕ.

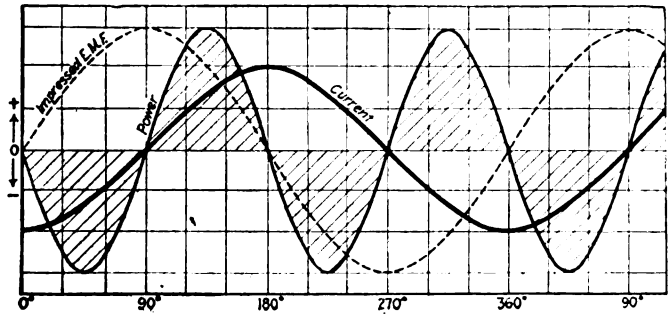

Fig. 11—Illustrating Conditions for Zero (0) Power Factor. Circuit is Wholly Inductive and Current Lags 90 Degrees Behind Impressed Electromotive Force

The vectors E_1 and E_A will be at right angles to one another because the current always lags 90 deg. behind the component of the voltage which neutralizes the counter e.m.f. of self-induction. Since E_A is the only component available for doing work, it follows that the average power taken by the circuit is equal to the product of *effective current* × the *available or energy component of the effective e.m.f.* (or the component of the e.m.f. in phase with the current), hence:—

(5) $P = E_A \times I$ (*watts*)

but

(6) $E_A = E \times \cos \phi$ (*volts*)

hence

(7) $P = I \times E \times \cos \phi$ (*watts*)

or

(8) $P = (I \times E) \times \cos \phi$ (*watts*)

Wherein.—P = the power in watts taken by the circuit. I = effective current in the circuit. E = effective e.m.f. impressed on the circuit. $\cos \phi$ = cosine of the angle by which the current lags behind the impressed e.m.f.

NOTE.—Cos is the abbreviation for cosine. If the length of the hypotenuse of any right-angled triangle be multiplied by the value called the cosine of the angle (base angle) the length of the base will be the result. That is (Fig. 6—*I*) $B = C \times \cos \phi$. Obviously, there is a different cosine value for every different angle. For example, cos 30 deg. = 0.866, cos 45 deg. = 0.707, cos 60 deg. = 0.500, etc. Complete tables of cosine values are given in handbooks and trigonometries. An abbreviated table is given in the author's AMERICAN ELECTRICIANS' HANDBOOK.

EXAMPLE.—What is the length of base of the triangle of Fig. 6—*II*? SOLUTION.—From a table of trigonometric functions it is found that cos 30 deg. = 0.866, hence $B = C \times \cos \phi = 39.3 \times 0.866 = 34$, which is the length of base.

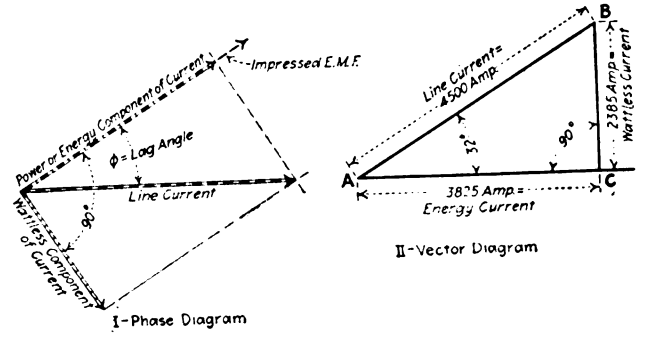

Fig. 12—Illustrating the Meaning of the Term "Wattless Current"

EXAMPLE.—The cos of 45 deg. = 0.707, hence the length of base of *III* = 28.2 × 0.707 = 20.

EXAMPLE.—The cos of 60 deg. = 0.500. Hence, in *IV*, $B = C \times \cos \phi = 23 \times 0.5 = 11.5$.

EXAMPLE.—In the circuit shown in Fig. 7 the relation of reactance to resistance is such that the energy e.m.f., as shown at *III*, lags just 30 deg. (as may be determined by constructing Impedance or Voltage Vector diagrams) behind the impressed e.m.f. Now, cos 30 deg. = 0.866. Hence, $P = E \times I \times \cos \phi = 100 \times 50 \times 0.866 = 4330$ *watts* = 4.3 *kw.*, which is the power being taken by the circuit shown.

EXAMPLE.—Referring to Fig. 8, the lag angle ϕ = 60 deg. Cos 60 deg. = 0.50. Therefore the power being taken by this circuit = $P = E \times I \times \cos \phi = 100 \times 50 \times 0.50 = 2500$ *watts* = 2.5 *kw.*

EXAMPLE.—Similarly, in the circuit of Fig. 9, ϕ = 75 deg. Cos 75 deg. = 25.9. Hence, in this circuit, $P = E \times I \times \cos \phi = 100 \times 50 \times 25.9 = 1295$ *watts* = 1.3 *kw.*

NOTE.—In all of the last three examples the current and the impressed e.m.f. are the same but all the power taken by the circuits decreases as their inductance—or reactances—increases.

Power factor is the name given to that quantity by which the product of effective volts and effective amp. in a circuit must be multiplied to obtain the true power in watts taken by the circuit. From equation (7) above, it is evident that (for a circuit containing inductance) the power factor is equal to the cos ϕ of the angle by which the current lags behind the impressed e.m.f. That is, power factor = cos ϕ. Hence, the greater the amount of inductance in a circuit, the lower will be the power factor. Power factor is expressed as a percentage. Refer to the author's AMERICAN ELECTRICIANS' HANDBOOK for a further discussion of the subject of power factor.

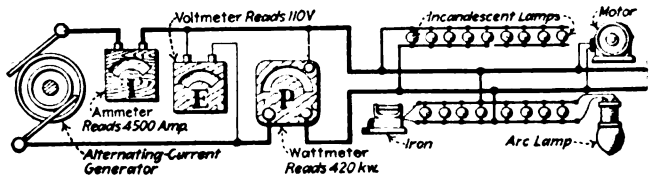

Fig. 13—Determination of the Power Factor of an Alternating-Current Circuit

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NOTE.—Obviously the nature of the load on a circuit determines its power factor. In practice the average values of power factors for circuits with different kinds of loads will be approximately as follows:—

Incandescent lighting—no motors,	95 per cent
Lighting and motors,	85 per cent
Motors only,	80 per cent

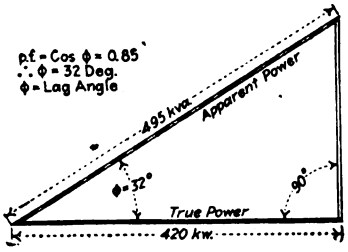


Fig. 14—Vector Triangle Indicating Relation of True to Apparent Power for Problem of Fig. 18

If a circuit contains resistance only, its power factor will be 100 per cent, and in such a circuit *volts* × *amp.* = *true power.*

Power factor cannot be greater than 100 per cent. See the author's AMERICAN ELECTRICIANS' HANDBOOK for a much more complete table of power factors of circuits having loads of different characteristics.

The formulas for power factor are for single-phase circuits (since cos ϕ = *power factor* which can be expressed merely as p.f.), these:—

(9) $$P = I \times E \times p.f. \qquad (watts)$$

(10) $$I = \frac{P}{E \times p.f.} \qquad (amp.)$$

(11) $$E = \frac{P}{I \times p.f.} \qquad (volts)$$

(12) $$p.f. = \frac{P}{I \times E} \qquad (power\ factor)$$

Wherein.—All of the symbols have the meanings given above.

Examples of circuits of 100 per cent power factor are given in Fig. 2.

EXAMPLE.—What is the actual power being taken by the multiple arc lighting circuit of Fig. 10—*I*? The impressed e.m.f. is 110 volts. The current is 86 amp. and the power factor of the load is 87 per cent. SOLUTION.—Substitute in the formula (9):—$P = I \times E \times p.f. = 86 \times 110 \times 87 = 8230$ *watts* = 8.2 *kw.*

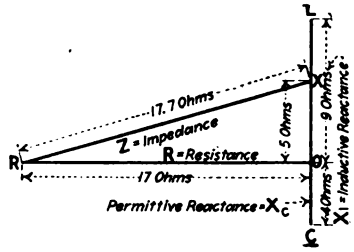


Fig. 15—Vector Diagram for a Circuit Containing Both Inductive and Permittive Reactance

EXAMPLE.—The alternating e.m.f. impressed on the alternating-current circuit of Fig. 10—*II* is 200 volts. It is known that the circuit is taking 2 kw. at 68 per cent power factor. What is the current? SOLUTION.—2 kw. = 2000 watts. Then substituting in the formula (10):—$I = P \div E \times p.f. = 2000 \div (200 \times 0.68) = 14.7$ amp.

EXAMPLE.—In an alternating-current circuit feeding a motor (Fig. 10—*III*) the following readings are taken:—Power = 42 kw. *E.M.F.* = 220 volts. Current = 225 amp. What is the power factor? SOLUTION.—42 kw. = 42,000 watts. Substitute in the formula (12):—$p.f. = P \div (I \times E) = 42{,}000 \div (225 \times 220) = 0.85$ = 85 per cent power factor.

The power factor of a wholly inductive circuit would, if such a circuit could exist, be zero. Fig. 11 illustrates graphically the conditions in such a circuit. Note that the area of the positive power loops above the reference line is the same as that of the negative power loops below the reference line, hence the net power taken by the circuit is zero.

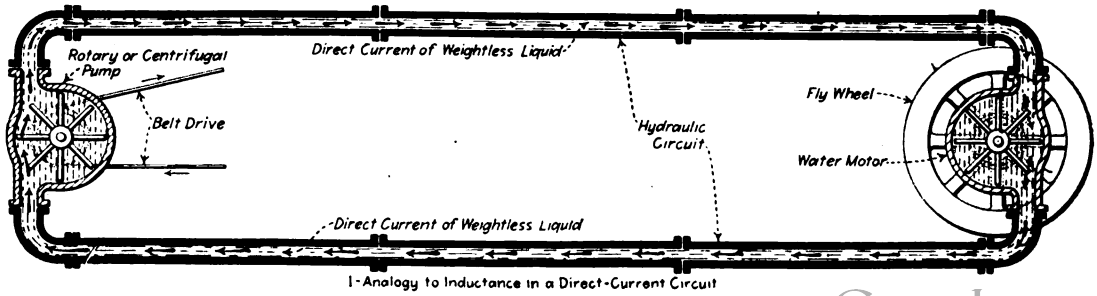
NOTE.—The graph of Fig. 11 is of theoretical interest only, inasmuch as it is apparent that no actual circuit could exist without some resistance. Some circuits, however, are almost wholly inductive and therefore the conditions in them approximate those delineated in Fig. 11. A circuit feeding the primary of a transformer, the secondary of which is open, is almost wholly inductive and the same is true of a circuit serving an induction motor operating at no load. It follows that the currents in such circuits are largely "wattless."

Wattless current is the name given to that part, portion or component of an alternating-current which may, when the situation is viewed in one way, be considered as being productive of no actual work. There is only one current—the line current—in a circuit (and it is always in phase with the available or energy e.m.f.), but it is sometimes convenient to assume that this current comprises two portions or "components":—(1) *the power or energy component*, in amp., which is of such value that when it is multiplied by the impressed e.m.f. in volts, the product will be the actual watts power taken by the circuit; (2) *the "wattless" component*, in amp., which, when multiplied by the impressed e.m.f. in volts, will give the apparent power or volt amperes taken by the circuit. Thus, Fig. 2—*I*, shows how the line current may be resolved graphically into so-called energy and wattless components; which must, because of their definitions, differ in phase by 90 deg. Refer also to Fig. 18. Furthermore, the energy component, to satisfy its definition as given above, is in phase with the impressed e.m.f. The angle between the energy component and the line current is—because the line current is always in phase with the energy component of e.m.f.—the same as the angle by which the line current lags behind the impressed e.m.f.

EXAMPLE.—Fig. 12—*II* is a vector diagram illustrating the relation between the line current, "wattless current" and "energy current," for the problem of Fig. 13. The line current vector *AB* was drawn proportional in length to 4500 amp. *AC* was laid off 32 deg. (this being the lag angle) below *AB* and of indefinite length. *BC* was dropped from *B* perpendicular to *AC*. Then the length *AC*, which scales 3825 amp., represents the "energy" current and *CB*, scaling 2385 amp., represents the "wattless" current. *AC* could have been obtained by multiplying *AB* by the cosine of 32 deg. *BC* could have been obtained by multiplying *AC* by the sine of 32 deg.

The effect of low power factor in a constant potential circuit is to increase the current necessary for the transmission of a given amount of power over that current which would transmit the same power in a circuit of unity power factor (a non-inductive circuit). That is, in circuits of low power factor the "wattless" current is considerable. This excess of current does not, in itself, represent an additional expenditure of energy, that is, it does not require more coal burned under the boilers. It does, however, involve slight additional energy expenditure because it increases the I^2R power loss in the conductors which it traverses. It has the further undesirable feature of decreasing, because of this same I^2R heating effect, the effective capacities of the generators. See the AMERICAN ELECTRICIANS' HANDBOOK for further information.

Low power factor may be corrected by the installation of synchronous motors or synchronous condensers. Low power



1-Analogy to Inductance in a Direct-Current Circuit

Fig. 16—Anology to Inductance in a Direct-Current Circuit

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factor in practice is frequently due to underloaded induction motors.

The practical determination of the power factor of a circuit may be made with an ammeter, a voltmeter, and a wattmeter. Alternating-current wattmeters always at any given instant indicate the product of the *average instantaneous current in a circuit* × *the average instantaneous energy e.m.f.* at that instant, hence they indicate true power. Ammeters and voltmeters indicate effective values and do not show anything in regard to phase relations. With 20 amp. in a circuit, the ammeter will read 20 amp. regardless of whether the current reaches its maximum and intermediate values at the same instant as does the voltage. That is, ammeters and voltmeters take no cognizance of phase relation. Hence the product of volts and amp. as indicated by these instruments is (in circuits containing inductance or permittance) apparent power taken by the circuit. The true power may be determined from wattmeter readings. Then the power factor can be readily computed.

EXAMPLE.—Fig. 10—*III* and the accompanying solution gives an example of the foregoing.

EXAMPLE.—Fig. 13 shows an alternating-current circuit serving a mixed motor and lighting load. The power, as indicated by the wattmeter, taken by the circuit is 420 kw. The impressed e.m.f. is 110 volts and the current is 4500 amp. What is the power factor? SOLUTION.—*Kilovolt amperes* = (*volts* × *amperes*) ÷ 1000 = (110 × 4500) ÷ 1000 = 495 kva. Now from equation (16) *p.f.* = *kw.* ÷ *kva.* = 420 ÷ 495 = 0.85 = 85 per cent power factor.

A vector diagram showing the relation of true power to apparent power may be plotted as suggested in Fig. 14. The general method involved is the same as that used in drawing impedance and voltage vector diagrams.

EXAMPLE.—In the problem of Fig. 13 the apparent power was shown to be 495 kva. and the true power 420 kw. Hence, if a right-angled triangle (Fig. 14) be drawn so that the base is proportional in length to the true power, 420 kva., and the hypotenuse so that it is proportional in length to the apparent power, 495 kw., the angle ϕ between them will be the angle by which the current lags behind the impressed e.m.f. The cos of this angle will then be the power factor of the circuit. In the example illustrated the angle ϕ is found to be 32 deg. and cos 32 deg. is, by referring to a table, found to be 0.85. Hence, the power factor of the circuit is 85 per cent.

True watts and apparent watts and true power and apparent power are terms that are frequently used. The true watts or true power delivered to a circuit is the actual power P (as indicated by a wattmeter) which is being consumed in a circuit. True power may be expressed either in watts or in kilowatts. The apparent watts or power (which is always in a circuit containing inductance or permittance greater than the actual power) is the product of the *effective voltage impressed* on the circuit times the *effective current* in the circuit. Apparent power may be expressed in volt amperes or in kilo volt amperes. Hence it follows from equation (9) since $I \times E$ = *apparent watts*, and cos ϕ = power factor (the following applies specifically to single-phase circuits):—

(13) *true watts* = *apparent watts* × *power factor.*
(14) *watts* = *volt amperes* × *power factor.*
(15) *kilowatts* = *kva.* × *power factor.*

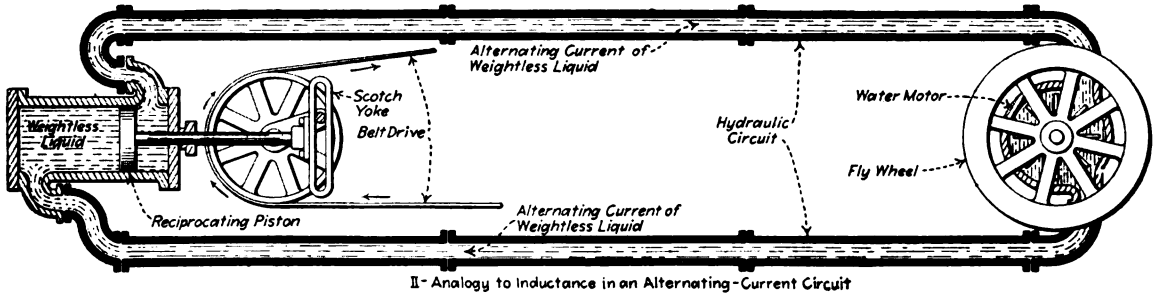

Fig. 17—Anology to Inductance in an Alternating-Current Circuit

Therefore, p.f. equals the ratio of true watts to apparent watts, that is:—

$$(16)\quad p.f. = \frac{\text{true watts}}{\text{apparent watts}} = \frac{\text{watts}}{\text{volt amperes}} = \frac{\text{kilowatts}}{\text{kilovolt amperes}} = \frac{kw.}{kva.}$$

NOTE.—The above may be graphically expressed by a right-angled triangle, Fig. 14, in which the hypotenuse represents *watts, true watts, kilowatts,* or *kw.*, and the base represents, respectively, *apparent watts, volt amperes, kilovolt amperes,* or *kva.* Then the base angle, ϕ, between them will be the lag angle. The cos of this angle, ϕ, which is numerically equal to the ratio between the hypotenuse and the base, is the power factor.

Power factor due to combined inductance and permittance in a circuit can be computed on the basis of the method suggested in Fig. 15.

NOTE.—A HYDRAULIC ANALOGY TO THE EFFECT OF INDUCTANCE IN A DIRECT-CURRENT CIRCUIT is suggested in Fig. 16, the inertia of the flywheel being analogous to the inductance of an electric circuit. The flywheel, by virtue of the blades of the water motor to which it is attached, tends to oppose the starting of a flow of current in the circuit. That is, it introduces a counter pressure for the period during which the flow of water is being started. After the flywheel has attained its speed, that is, when the flow of water has attained its normal value, the only counter force then offered is due to the frictional resistance which is analogous to electrical resistance. Similarly, if the belt were thrown off of the centrifugal pump, so that it no longer exerted an impelling force in the circuit, the inertia of the flywheel acting through the blades of the water motor would continue the flow of water in the circuit for a time after the driving power had been discontinued from the pump. Note that the inertia of this hydraulic circuit is not due to the current of liquid in it, because the liquid is supposed to be weightless.

NOTE.—A HYDRAULIC ANALOGY TO INDUCTANCE IN AN ALTERNATING-CURRENT CIRCUIT is illustrated in Fig. 17. The inertia of the flywheel acting through the blades of the water motor tends to oppose any change in the rate of flow of the weightless liquid, which is analogous to electricity. If the rate of flow tends to increase, the inertia of the flywheel opposes it. On the other hand, if the current tends to decrease or change in direction, the flywheel acting through the water motor blades also opposes such changes.

Power factor due to permittance or capacitance is a quantity that applies to permittive circuits in a way similar to that in which power factor, due to inductance, applies to inductive circuits. However, since the charging current due to permittance is leading, the power factor due to permittance is a leading power factor, while that due to inductance is a lagging power factor.

NOTE.—Leading power factors of appreciable value are seldom encountered in circuits excepting those operating at relatively high voltages. Leading power factors can be produced in a circuit by operating an over-excited synchronous motor or "condenser" in the circuit. Hence, with a synchronous motor or condenser in a circuit lagging power factor can be neutralized

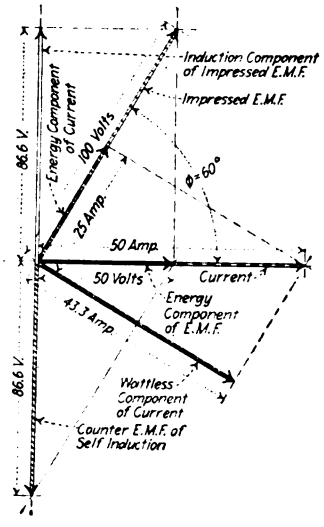

Fig. 18—Showing Vector Relations Between e.m.f. and Current Components for the Circuit Shown in Fig. 8

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Maintenance Men	1	26	High School	6 yrs.	.....	Anywhere.
Managers, Commercial Department	1	43	Practical	12 yrs.	$200	Anywhere.
Managers, Contracting	1	26	College	5 yrs.	$125	Anywhere.
Managers, Jobbing House	2	32	College	13 yrs.	$2,400-10,000	Anywhere.
Managers, Office	3	26–32	High School	10 yrs.	$200	Anywhere.
Managers, Plant	21	25–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere.
Managers, Store	1	29	Univ.	10 yrs.	$125	West.
Managers, Railway	1	39	Practical	4 yrs.	$200	Anywhere.
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113. Sales Engineer. Large New York jobber wants suitable man with college education.

114. Dynamo Tenders. Ohio public service concern wants several men.

116. Draftsman. Opening with Arkansas lighting company.

117. Clerk. Opportunity for young man to work into position as salesman in Middle West.

118. Switch Board Erectors and Transformer Men. Ohio public service corporation wants five capable men.

119. Salesmen. Men acquainted with motor trade needed by New Orleans electrical supply house.

120. Salesmen. Chicago house has opening for man who has had experience with electric specialty and flashlight lines.

121. Salesmen. Electric stove manufacturer has opening for several experienced men.

122. Electricians. Two all around men wanted by Indiana public service concern.

123. Electric Engineer. Detroit manufacturer has attractive opening for young man having technical training, especially in mathematics.

124. Fuse Salesman. Large Middle West manufacturer has place for two men, one each in East and West; Commission with drawing account.

125. Meter Man. Forty cents an hour for eight-hour day, with overtime, paid by Texas public service concern.

126. Wiremen. Ohio contractor is in need of several competent men.

127. Electrician. All round machine shop repair man wanted in Ohio.

128. Chandelier Salesman. Oklahoma fixture house will pay $25 per week for capable man.

129. Electrician. Combined house-wiring and line-work man wanted by Missouri public service concern.

130. Mechanical Superintendent. $175 per month opening with reclamation service in North Dakota for man competent to take charge of steam generating station, supplying power for nearby city, also for irrigation purposes. Married man preferred; five-room cottage available at $12 per month; school facilities; should be on ground by October 15; to take charge November 1.

131. Traveling Salesman. Experienced electrical man wanted to cover Alabama and Tennessee; good proposition for right man.

132. Salesmen. Brooklyn house has opening for several men familiar with flashlight and miniature battery lines.

133. Miscellaneous. Eastern telephone company is in need of draftsmen, linemen, wiremen, maintenance men and telephone engineers.

134. Salesman. Texas electric supply house will pay $90 per month for experienced man not subject to draft.

137. Armature Winder. New York firm will pay $24 for 48-hour week, with excellent chances for advancement. for men familiar with winding and repairs on A. C, and D. C. motors and dynamos.

138. Salesmen. Southern electric supply house will pay $85 per month for young men with some experience selling.

140. Electricians. Kansas City contracting concern is in need of several men.

141. Salesmen. Hustler wanted to sell electrical and auto supplies in Southern Illinois, Western Kentucky and Tennessee.

142. Salesmen. Chicago house can use several men to sell Brascolites on commission.

143. Salesmen. Good opening for man familiar with sale of appliances, window trimmings, to estimate wiring and fixture job.

146. Draftsman. Capable man wanted by large eastern electrical manufacturer.

147. Maintenance Man. Opening ready with Philadelphia electrical house.

148. Central Station Engineers. Salary and board offered by pleasure resort for man who is also a fair mechanic.

149. Clerical-Purchasing. Combination opening with Philadelphia electrical house.

150. Salesmen-Sales Engineers. Men with E. E. training and several years practical mechanical experience are needed by middle-west electrical manufacturer.

151. Salesmen. Public service concern is looking for men; central station experience desirable but not necessary.

152. Salesmen. Experienced men wanted by large jobbing concern.

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(J. O. Blackstone, Po. 15318, Second Tribune)

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BAUM, B. E., Po. 19260, First Tribune, care Vermillion County Telephone Co.....Danville
BROWN, EDWIN C., Po. 5278, First Tribune, care Galva Electric Light Co...Galva
GREEN, WM. A., Po. 13279, care Green Electric Co., 315 South Jefferson St...Peoria
(Jas. R. Downs, Po. 13277, Second Tribune)
KETTRON, C. W., Po. 16416, First Tribune, President, Illinois Elect. Porc. Co.....Macomb
LANPHIER, R. C., Po. 3236, care Sangamo Electric Co.....Springfield
(James R. Massey, Po. 8930, Second Tribune)
MORSE, CHESTER A., Po. 14611, First Tribune, care Central Public Illinois Service Co.....Mattoon
(Donald R. Truax, Po. 14617, Second Tribune)

ILLINOIS—Continued
MOTT, H. A., Po. 17507, First Tribune, care Chicago Telephone Co., 212 West Washington St.....Chicago
(A. L. Nelson, Po. 15384, Second Tribune)
WESSEL, O. E., Po. 9814, First Tribune, care East St. Louis Light & Power Co.....East St. Louis
(Chas. E. Broderick, Po. 1154, Second Tribune)
YONTS, CHAS. B., Po. 11040, First Tribune, care Northern Illinois Utilities Co.....Dixon

INDIANA
BOOHER, O. M., Po. 12493, First Tribune, Manager, Commercial Department, Indiana Railways & Light Co.....Kokomo
HARRIS, A. B., Po. 14154, First Tribune, 570 Washington St.....Gary
LEE, WALLACE O., Po. 11440, First Tribune, Indianapolis Light, Heat & Power Co.....Indianapolis
KLINE, J. J., Po. 6165, First Tribune, care Fort Wayne Works, General Electric Co.....Fort Wayne
(Jas. I. Toy, Po. 14768, Second Tribune)
NIGHT, CHAS. H., Po. 4828, First Tribune, care Indiana & Michigan Electric Co.....South Bend

IOWA
FLACK, FRANK W., Po. 13979, First Tribune, care Iowa Ry. & Light Co..Coon Rapids
KING, R. H., Po. 3984, First Tribune, care King Plumbing Co.....Keokuk
LOVEGROVE, N. W., Po. 5638, First Tribune, care Herring Motor Co..Des Moines
MCINNERNEY, B., Po. 1400, First Tribune, care Kimball Bros. & Co..Council Bluffs
(E. S. Damon, Po. 1398, Second Tribune)
MURPHY, J. E., Po. 15800, First Tribune, care Murphy-Dunham Co..Sioux City

KANSAS
CAMP, ROBERT N., Po. 16505, First Tribune, 108½ East Ash St.....Salina
(J. E. French, Po. 15811, Second Tribune)
CATES, WILLIAM C., Po. 17862, First Tribune, care Cates Electric Co...Hutchinson
HARVEY, J. L., Po. 6546, First Tribune, care General Electric Co., 945 Emporia St.....Wichita
(Charles A. Stanley, Po. 9690, Second Tribune)
HUBBARD, HARVEY B., Po. 17623, First Tribune, care Hubbard Electric Co..Beloit
MAGRUDER, H. W., Po. 15816, First Tribune, care Liberal Light, Ice & Power Co.....Liberal
MURPHY, JAS. R., Po. 15817, First Tribune, care Great Bend Water & Electric Light Co.....Great Bend

KENTUCKY
ADAMS, F. C., Po. 18315, First Tribune, proprietor, Adams Electric Co...Sulphur
BERRY, D. EARLE, Po. 8245, First Tribune, care Ruby House.....Owensboro
HANNAH, W. M., JR., Po. 13652, First Tribune, care General Electric Co..Lexington
MONTGOMERY, ROBERT, Po. 6147, First Tribune, care Louisville Gas & Electric Co.....Louisville
(C. C. Childers, Po. 15494, Second Tribune)

LOUISIANA
AICKLEN, WM. J., JR., Po. 5666, First Tribune, care Consumers Electric Light & Power Co.....New Orleans
(W. A. Porteous, Po. 9226, Second Tribune)
CAMERON, HENRY F., Po. 2556, First Tribune, care Lake Charles Railway, Light & Waterworks Co.....Lake Charles

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LOUISIANA—Continued

JOUBERT, W. C., Po. 16467, First Tribune, 409 Main St.....Baton Rouge
McCONNELL, JOHN J., Po. 17031, First Tribune, care Rayville Light Plant..Rayville
WILLIAMS, J. A., Po. 5053, First Tribune, care Southwest Gas & Electric Co.....Shreveport
(H. E. Cahn, Po. 13025, Second Tribune)

MARYLAND

(Stanley B. Prather, Po. 1650, Second Tribune).....Baltimore

MASSACHUSETTS

DERRY, H. W., Po. 8022, First Tribune, care Pittsfield Electric Co.....Pittsfield
(T. G. Crawford, Po. 7930, Second Tribune)
LAVIN, LEO J., Po. 15143, First Tribune, 95 Pleasant St.....Worcester
(Kurt R. Sternberg, Po. 7612, Second Tribune).....Springfield

MICHIGAN

AVIS, CLYDE J., Po. 10086, First Tribune, Treasurer, Southern Michigan Light & Power Co.....Morenci
(Samuel Ball, Po. 19542, Second Tribune).....Bay City
BRUSH, NORMAN O., Po. 11198, First Tribune, care Capital Electric Co...Lansing
(Guy G. Crane, Po. 13059, Second Tribune)
COTTON, GEORGE, Po. 10089, First Tribune, 821 Lyon St.....Grand Rapids
(Carl Johnston, Po. 12841, Second Tribune)
COURVILLE, H. W., Po. 13954, First Tribune, care Commonwealth Power Co..Jackson
(L. C. Tefft, Po. 14209, Second Tribune)
CURTIS, ROBT. E, Po. 19050, First Tribune, care Benton Harbor & St. Joe Railway & Light Co.....Benton Harbor
(Carl A. Burchards, Po. 19049, Second Tribune)
KLOSE, LEROY, Po. 13959, First Tribune, care L. R. Klose Electric Co...Kalamazoo
(Harry D. Georgia, Po. 16324, Second Tribune)
DUQUETTE, EDWARD, Po. 14965, First Tribune, 69 Mason Ave.....Muskegon
HOLLAND, RAY K., Po. 11476, First Tribune, care Gardner & Williams, Cornwall Building.....Ann Arbor
(Geo. E. Lewis, Po. 11481, Second Tribune)
KIMBLE, RICHARD L., Po. 283, First Tribune, care Electric Supply Co...Saginaw
(Geo. A. Trombley, Po. 14750, Second Tribune)
(T. E. Lowe, Po. 11027, Second Tribune)
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St.....Traverse City
McCLOY, A. S., Po. 11051, First Tribune, care Stevenson Hotel.....Detroit
(J. T. Pearson, Po. 11210, Second Tribune)
RAYNES, J. FRANK, Po. 13965, First Tribune, care Michigan Carton Co., 61 West St.....Battle Creek
(Edw. G. Austin, Po. 15151, Second Tribune)
SCHAGANE, P. F., Po. 13871, First Tribune, 617 South Saginaw St.....Flint
(L. G. Copeman, Po. 7219, Second Tribune)
WATSON, GEO. H., Po. 12848, First Tribune, care Consumers Power Co., 124 Monroe St.....Grand Rapids
(R. H. Vandermass, Po. 16484, Second Tribune)

MINNESOTA

CURTIS, O., Po. 11830, First Tribune, care Tri-State Tel. & Tel. Co., 301 South Seventh St.....Minneapolis
(Emil Anderson, Po. 7805, Second Tribune)
FULLER, FLOID M., Po. 8189, First Tribune, 813 Torrey Building.....Duluth

MISSISSIPPI

GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co.....Gulfport
McANGE, W. N., Po. 16854, First Tribune, care Southern Telephone & Telegraph Co., Telephone Building.....Corinth
NEWBILL, HOMER J., Po. 16855, First Tribune, Box 413.....Tupelo
WILSON, J. B., Po. 18198, First Tribune, care Meridian Light & Railway Co..Meridian
(H. E. Brandli, Po. 15617, Second Tribune)

MISSOURI

ANDERSON, GEORGE E., Po. 2132, First Tribune, 117 South William St....Moberly
(Nelson Roth, Po. 1427, Second Tribune)
BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co.....Marshall
BOWLES, JOHN D., Po. 17658, care Springfield Gas & Electric Co.....Springfield
(H. T. Ford, Po. 17761, Second Tribune)
BRATNEY, JOHN F., Po. 17779, care Missouri & Kansas Telephone Co. Kansas City
(F. L. Funsten, Po. 3043, Second Tribune)
CORNELL, A. C., Po. 5756, First Tribune, care Western Electric Co., 814 Spruce St.....St. Louis
(C. E. Michel, Po. 9061, Second Tribune)
FOX, CHAS. D., Po. 18163V, First Tribune, care City Light Plant.....St. Joseph
(S. W. Beale, Po. 6840, Second Tribune)
HENDERSON, C. C., Po. 6249, First Tribune, P. O. Box 302.....Joplin
(A. M. Grall, Po. 4112, Second Tribune)
NIENHAUS, J. V., Po. 19219, First Tribune, care Perry County Public Utilities Co.....Perryville

NEBRASKA

BURLEY, W. B., Po. 10291, First Tribune, 318½ West Koenig St.....Grand Island
(J. D. Whitmore, Po. 1409, Second Tribune)

NEVADA

PETERSON, JOHN, R., Po. 5888, First Tribune, P. O. Box 388.....Sparks

NEW JERSEY

ALEXANDER, JOHN P., Po. 11892, First Tribune, Broad St. Bank Bldg.....Trenton
COLLISON, GEORGE L., Po. 17040, First Tribune (for Passaic County), 188 Ellison St.....Paterson
COX, W. A., Po. 18960, First Tribune, care Public Service Electric Co...Newark
(J. N. Adam, Po. 18975, Second Tribune)
FEY, W. E., Po. 10120, First Tribune, care Diehl Manufacturing Co..Elizabeth
NEWMAN, C. R., Po. 3380, First Tribune, 17½ Howe Ave.....Passaic
STERLING, HARRY CAULFIELD, Po. 11014, First Tribune, care Atlantic City Electric Co.....Atlantic City
STORTZ, H. W., Po. 16450, First Tribune, care Edison Storage Battery Co..Orange
(J. B. Renwick, Po. 16445, Second Tribune)

NEW MEXICO

ROBERTS, E. A., Po. 17980, First Tribune, care Public Utilities Co.....Carlsbad
SHEPARD, JAS. A., Po. 16106, First Tribune, care Deming Ice Electric Co...Deming
SMITH, JAMES R., Po. 16107, First Tribune, care Raton Electric Light & Power Co.....Raton
SOUTHARD, W. P., Po. 16108, First Tribune, care Albuquerque Gas, Electric Light & Power Co.....Albuquerque

NEW YORK

(W. M. Deming, Po. 261, Second Tribune)
BARTON, A. H., Po. 5461, First Tribune, care General Electric Co., Schenectady.....Utica
(C. C. MacKenzie, Po. 2029, Second Tribune).....Syracuse
BURNS, JOHN H., Po. 870, First Tribune, care McCarthy Bros. & Ford, 41 Eagle St.....Buffalo
(L. F. Philo, Po. 774, Second Tribune)
HINES, E. G., Po. 16222, First Tribune, 239 West Thirty-Ninth St..New York City
(J. Lloyd Prince, Po. 4263, Second Tribune

NEW YORK—Continued

REQUA, WM. A., Po. 1277, First Tribune, 95-97 St. Paul St.....Rochester
(B. E. Finucans, Po. 16134, Second Tribune)
RUSSELL, R. E., Po. 5561, First Tribune, care General Electric Co....Schenectady

NORTH CAROLINA

ANDERSON, CHAS. B., Po. 14935, First Tribune, care Carolina Power & Light Co.....Raleigh
JONES, WM. T., Po. 5685, First Tribune, P. O. Box 405.....Fayetteville
PICKARD, B. F., Po. 17250, First Tribune, care North Carolina Public Service Co.....Greensboro
(James L. Griffin, Po. 5683, Second Tribune)
SPEAKE, CHAS. L., Po. 16993, First Tribune, care Westinghouse Electric & Manufacturing Co.....Charlotte
(Robt. H. Witherspoon, Po. 4717, Second Tribune)

OHIO

BATEMAN, J. M., Po. 2610V, First Tribune, care Western Electric Co...Cleveland
(Paul B. Zimmerman, Po. 7305V, Second Tribune)
BRAUN, W. A., Po. 14652, First Tribune, care Braun Electric Manufacturing Co.....Dover
CREAGHEAD, THOMAS. J., Po. 3013, care Creaghead Engineering Co., 342 Main St.....Cincinnati
(W. P. Holcombe, Po. 901V, Second Tribune)
CRAIN, CHARLES E., Po. 6946, First Tribune, care Crain-Stuart Co.....Springfield
(Fred J. Green, Po. 6951, Second Tribune)
EFFINGER, V. H., Po. 15900, First Tribune, Pres., V. H. Effinger Electric Co..Lima
EICHHORN, HARRY E., Po. 7099, First Tribune, care Municipal Electric Plant.....Columbus
(G. F. Evans, Po. 16157, Second Tribune)
HALL, CHAS. S., Po. 12345, First Tribune, care Wm. Hall Electric Co., 916 Oliver St.....Dayton
(F. B. Steele, Po. 13451, Second Tribune)
(L. J. Lemen, Po. 13195, Second Tribune)
HENCH, L. W., Po. 7854, First Tribune, care Westinghouse Electric & Manufacturing Co.....Youngstown
(E. A. Sanders, Po. 9666, Second Tribune)
HURD, WILLIAM P., Po. 9798, First Tribune, District Manager, Northwestern Ohio Light Co.....Urbana
KUNZ, HOMER C., Po. 15892, First Tribune, care Toledo Railway & Light Co.....Toledo
LANE, ROBERT E., Po. 8422, First Tribune, Stark County.....Alliance
League, 1419 Cleveland Ave.....Canton } Stark County
(L. J. Lemon, Po. 3195, Second Tribune) } Massillon
LOEWE, P. M., Po. 3942, First Tribune, care Oberlin Gas & Electric Co..Oberlin
MILLER, E. G., Po. 13108, First Tribune, care Warren & Niles Telephone Co..Warren
MOYER, HAROLD, L., Po. 14386, First Tribune, 43 South New York St....Kenmore
PARKER, HERBERT L., Po. 905, First Tribune, care Conneaut Metal Works Co.....Conneaut
SALBER, W. E., Po. 14397, First Tribune, 408 Spicer St.....Akron
(J. D. Witner, Po. 14412, Second Tribune)
SIMS, E. A., Po. 5968V, First Tribune, care Avery-Loeb Electric Co.....Newark
(F. C. Morrison, Po. 18630, Second Tribune)
SLOAT, R. G., Po. 18452, First Tribune, care Sandusky Gas & Electric Co.....Sandusky
SMITH, E. B., Po. 10596, First Tribune, care Coshocton Gas Co.....Coshocton
(Irwin Miller, Po. 10592, Second Tribune)
STONE, JAMES L., Po. 19724, First Tribune, care Mansfield Electric Light & Power Co.....Mansfield
(Joseph Parrot, Po. 19723, Second Tribune)
WESSELL, ERLING, Po. 18094, First Tribune, care Athens Electric Co.....Athens

OKLAHOMA

BEERBOWER, LINCOLN, Po. 1475, First Tribune, P. O. Box 935.....Enid
HOWELL, EDWARD, Po. 7896, First Tribune, care Abernathy & Howell, Elks Building.....Shawnee
MEYER, FRANK J., Po. 1484, First Tribune, care Oklahoma Gas & Electric Co.....Oklahoma City
(R. D. Sheldon, Po. 18856, Second Tribune)
WELCH, CHAS. H., Po. 18858, First Tribune, care City Water & Light Dept..Altus
WHITE, L. A., Po. 14275, First Tribune, care Muskogee Gas & Electric Co..Muskogee
WILCOX, E. A., Po. 6830V, First Tribune, care Public Service Co. of Okla....Tulsa
(J. M. Kinslow, Po. 16770, Second Tribune)

PENNSYLVANIA

HALLSTROM, A. L., Po. 1611, First Tribune, care Western Electric Co., Eleventh and York Sts.....Philadelphia
(Frank P. Groves, Po. 3350, Second Tribune)
FERREE, L. L., Po. 18865, First Tribune, 1830 Regina St.....Harrisburg
(T. R. F. Peyton, Po. 12438, Second Tribune)
FARR, J. S., Po. 14876, First Tribune, 309 Sheredon Ave.....New Castle
(H. N. Wood, Po. 16316, Second Tribune)
HOMMEL, LUDWIG, Po. 4336, First Tribune, care L. Hommel & Co., 947 Pennsylvania Ave.....Pittsburgh
KRISE, W. M., Po. 4823, First Tribune, Manager, Jefferson Electric Co Punxsutawney
LODGE, JOS., Po. 18869, First Tribune, 157 East Chestnut St.....Lancaster
MURPHY, WALTER R., Po. 14021, First Tribune, care Meadville Telephone Co.....Meadville
(Carl W. Wilks, Po. 10848, Second Tribune)
(W. T. Snyder, Po. 5128, Second Tribune)
REGER, THOMAS E., Po. 4637, First Tribune, 224 Seventh Ave.....Altoona

SOUTH CAROLINA

(T. A. Brookbanks, Po. 16460, Second Tribune)

TENNESSEE

ALLEN, TERRY E., Po., 18838, First Tribune, P. O. Box 185.....Jackson
COCHRAN, C. P., Po. 15212, First Tribune, City Hall.....Nashville
(Grayson Jones, Po. 13782, Second Tribune)
RUTLEDGE, C. B., Po. 2127, First Tribune, care Bluff City Electric Co..Memphis
(B. F. Myers, Po. 12911, Second Tribune).....Chattanooga
SCOTT, E. L., Po. 11162, First Tribune, 115 West Seventh St.....Chattanooga
(I. L. Faucett, Po. 7425V, Second Tribune)
SELF, LEWIS P., Po. 7888, First Tribune, care Knoxville Electric Co.....Knoxville
(Sam P. Watson, Po. 15059, Second Tribune)

TEXAS

(C. E. Converse, Po. 8558, Second Tribune).....San Antonio
IRVINE, R. J., Po. 6251, First Tribune, care San Angelo Water Light & Power Co.....San Angelo
COPLEY, F. F., Po. 7073, First Tribune, care Central Electric Co.....Waco
(L. B. Gardner, Po. 11390, Second Tribune)
HARRIS, A. L., Po. 10643, First Tribune, care Brush Electric Co.....Galveston
(Max Levy, Po. 10652, Second Tribune)
LARABEE, R. W., Po. 1327, First Tribune, care Southwestern Electric & Machine Co.....El Paso
MONTGOMERY, JOHN G., Po. 11355, First Tribune.....La Marque
MUNROE, WALTER N., Po. 3085, First Tribune, care Texas Power & Light Co.....Paris
NEWNING, H. M., Po. 16304V, First Tribune, 1118 Calhoun St.....Houston

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TEXAS—Continued

PATRICK, S. V., Po. 1933, First Tribune, 2805 Monterey St.....San Antonio
REID, BRUCE, Po. 18290, First Tribune, care Gulf Refining Co.....Port Arthur
(Edward T. Keck, Po. 18284, Second Tribune)
SMITH, GEO. B., Po. 6649, First Tribune, 309 Guadalupe St.....San Marcos } Central Texas League { Lockhart, Luling, Seguin, New Braunfels, San Marcos
(Fred J. Bachman, Po. 16777, Second Tribune)
WAKEFIELD, R. S., Po. 2660, First Tribune, 1312 Busch Building.....Dallas
WHITE, FRANK A., Po. 2216, First Tribune, care West Texas Electric Co..Sweetwater
WRIGHT, J. A., Po. 2242, First Tribune, care Nunn Electric Co.....Amarillo

UTAH

DOUGLAS, JAS. A., Po. 16984, First Tribune, care Municipal Electric Plant.....Salt Lake City
WOLF, H. M., Po. 12774, First Tribune, Preisdent, Cache Valley Electric Co..Logan

VIRGINIA

BRINKLEY, R. J., Po. 14497V, First Tribune, care Virginia Railway & Power Co.....Suffolk
EVANS, W. T., Po. 14939, First Tribune.....Hopewell
FICKLIN, W. F., JR., Po. 12453, First Tribune, care Staunton Lighting Co..Staunton
(R. F. Lyons, Po. 12459, Second Tribune)
GOODLOE, H. B., Po. 11169, First Tribune, 116 First National Bank Bldg..Roanoke
MARCHMONT, G. T., Po. 14497, First Tribune, care Western Electric Co..Richmond
(W. C. Wells, Po. 14494, Second Tribune)
WOODHOUSE, H. C., Po. 6618, First Tribune, 54 Bank St.....Norfolk
(C. S. Ristine, Po. 7477, Second Tribune)

WASHINGTON

HAROLD, W. H., Po. 840, First Tribune, Box 455.....Walla Walla
(H. B. Pierce, Po. 7235, Second Tribune).....Spokane

WEST VIRGINIA

COSTINE, THOS. E., Po. 7699, First Tribune, 1059 McColloch St.....Wheeling
(R. R. Fagin, Po. 9161, Second Tribune)
DAVISSON, W. C., Po. 14813, First Tribune, care West Virginia Water & Electric Co.....Charleston
GOLDEY, P. R., Po. 5784, First Tribune, 1125 Nineteenth St.....Parkersburg
HADDOX, H. A., Po. 9164, First Tribune, 843 Fourth Ave.....Huntington

WISCONSIN

CARSON, A. G., Po. 13999, First Tribune, care Eastern Wisconsin Railway & Light Co.....Fond du Lac
DEARTH, E. C., Po. 17144V, First Tribune, care Wisconsin & Minnesota Light & Power Co.....Eau Claire
(Holmes Ives, Po. 18253, Second Tribune)
DUNHAM, A. W., Po. 7352, First Tribune, care Sun Ray Manufacturing Co..Oshkosh
ENGSBERG, B. C., Po. 15985, First Tribune, care Light and Water Dept..Lake Mills
IVES, HOLMES, Po. 18253, First Tribune, care Wisconsin-Minnesota Light & Power Co.....Chippewa Falls
LINKER, P. R., Po. 14302, First Tribune, care Wisconsin-Minnesota Light & Power Co.....La Crosse
Dan. Whalen, Po. 16022, Second Tribune)
TESSIER, LEONARD, L., Po. 18823, care De Pere Electric Light & Power Co..De Pere
ROBERTS, ELMER D., Po. 10997, First Tribune, 308 Sixth St.....Racine
SCHEURMANN, A. R., Po. 17653, First Tribune, 8 Main St.....Watertown
ST. JOHN, JOHN, Po. 12836, First Tribune, care Madison Gas & Electric Co..Madison
PEDLEY, W. S., Po. 12831, First Tribune.....Platteville
VAN VLEET, R. M., Po. 1094V, First Tribune, care Cutler-Hammer Manufacturing Co.....Milwaukee
(J. W. Pfeifer, Po., 10981, Second Tribune)

CANADA

ALBERTA

(David Conn, Po. 11885, Second Tribune)

MANITOBA

BAKER, L. R., Po. 12849, First Tribune, Oakview Ave., East Kildonan, Man.....Winnipeg
(J. S. Henry, Po. 5994, Second Tribune)

ONTARIO

(C. B. Deeks, Po. 17101, Second Tribune).....Coniston
COOKE, W. P., Po. 16714, First Tribune, P. O. Box 178.....Port Arthur

SASKATCHEWAN

SANGSTER, A. G., Po. 7496, First Tribune, 820 Fourteenth St., East...Saskatoon

SPAIN

EDDY, H. W., Po. 11105, First Tribune, care Riegos y Fuerza del Ebro S. A. Apartado 491.....Barcelona

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Asheville, N. C.—LANGREN	.....	.....
Baltimore, Md.—EMERSON	$2.00	$2.50
Boise, Ida.—IDANHA	$1.00	$1.50
Boston, Mass.—BRUNSWICK	.....	.....
Charlotte, N. C.—BUFORD	$1.00	$1.50
Chattanooga, Tenn.—THERESA	.....	.....
Colorado Springs, Colo.—ACACIA	.....	.....
Columbia, S. C.—COLONIAL	.....	.....
Dallas, Tex.—ORIENTAL	$1.50	.....
Des Moines, Ia.—KIRKWOOD	.....	.....
Denver, Colo.—ALBANY	$1.00	$1.50
Detroit, Mich.—HOTEL TULLER	.....	.....
Dixon, Ill.—DIXON INN	$1.00	.....
Edmonton, Alta.—ALBERTA	.....	.....
Eau Claire, Wis.—EAU CLAIRE	.....	.....
Ft. Wayne, Ind.—WAYNE	$1.00	.....
Ft. Worth, Tex.—METROPOLITAN	.....	.....
Gary, Ind.—GARY	$1.00	$1.50
Grand Rapids, Mich.—LIVINGSTON	$1.00	.....
Harrisburg, Pa.—COLUMBUS	.....	.....
Houston, Tex.—BENDER	$1.50	$2.00
Hutchinson, Kan.—CHALMERS	.....	.....
Idaho Falls, Ida.—ELEANORE	$1.00	$2.00
Jackson, Miss.—ROYAL	.....	.....
Jacksonville, Fla.—MASON	.....	.....
Jacksonville, Ill.—PACIFIC	.....	.....
Kalispell, Mont.—KALISPELL	$1.00	.....
Kansas City, Mo.—COATES	$1.00	$1.50
Lethbridge, Alta.—ALEXANDRIA	$1.00	.....
Los Angeles, Cal.—CLARE, NEW ROSTLYN	$1.00	$1.50
Louisville, Ky.—GALT	.....	.....
Madison, Wis.—CAPITAL	$1.00	.....
Milwaukee, Wis.—CHARLOTTE	$1.00	.....
Mitchell, S. D.—NEW NAVIN	.....	.....
Montgomery, Ala.—EXCHANGE	.....	.....
Montreal, P. Q.—ST. LAWRENCE HALL, WINDSOR	.....	.....
Muskegon, Mich.—MUSKEGON	$1.00	$1.50
New Orleans, La.—DE SOTO	$1.00	.....
New York, N. Y.—BRESLIN	.....	.....
Niagara Falls, N. Y.—PROSPECT	.....	.....
Norfolk, Va.—SOUTHLAND	$1.00	$1.50
Oshkosh, Wis.—TREMONT	.....	.....
Peoria, Ill.—MECCA	$1.00	.....
Philadelphia, Pa.—NEW BINGHAM	$1.50	$2.50
Pittsfield, Mass.—WENDELL	$1.50	.....
Portland, Ore.—MULTNOMAH	$1.50	.....
	OREGON	$1.00	$2.00
Richmond, Va.—JEFFERSON	$1.50	$2.50
	RICHMOND	$1.50	$2.50
Roanoke, Va.—ROCKLEDGE	$1.00	.....
Rochester, N. Y.—POWERS	.....	$2.00
Rutland, Vt.—BERWICK	.....	.....
St. Joseph, Mo.—ST. FRANCIS	.....	.....
St. Louis, Mo.—AMERICAN	$1.50	.....
Salt Lake City, Utah—NEWHOUSE	.....	.....
San Angelo, Tex.—LANDON	.....	.....
San Diego, Cal.—SAN DIEGO	$1.00	.....
San Francisco, Cal.—ARGONAUT	$1.00	$2.00
	SUTTER	$1.50	.....
Santa Barbara, Cal.—POTTER	.....	.....
Schenectady, N. Y.—MOHAWK	$1.00	$2.00
Seattle, Wash.—SEATTLE	$1.00	$2.00
Sheridan, Wyo.—SHERIDAN	.....	.....
Shreveport, La.—YOUREE	.....	.....
Sioux City, Ia.—MARTIN	$1.00	$2.00
Spokane, Wash.—SPOKANE	.....	.....
Springfield, Mo.—COLONIAL	.....	.....
Tacoma, Wash.—OLYMPUS	.....	.....
Three Rivers, Mich.—THREE RIVERS	$2.00	.....
Tucson, Ariz.—HEIDEL	.....	.....
Vicksburg, Miss.—CARROLL	$1.00	.....
Waco, Tex.—NEW STATE	$1.00	$2.00
Watertown, S. D.—KAMPESKA	$1.00	.....
Winnipeg, Man.—ST. REGIS	$1.50	.....
	WELLINGTON	$1.00	$1.50
Winona, Minn.—WINONA	.....	.....

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Kansas City, Mo.	"	**No. 2**
Pittsburgh	"	**No. 3**
Minneapolis	"	**No. 4**
St. Joseph, Mo.	"	**No. 5**
Louisville, Ky.	"	**No. 6**
Stark County Jovian League Comprising the towns of Massillon, Canton and Alliance, Ohio.	"	**No. 7**
Tulsa, Okla.	"	**No. 8**
Eau Claire, Wis.	"	**No. 9**
Harrisburg, Pa.	"	**No. 10**
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Southwestern Michigan Jovian League Benton Harbor, Michigan	"	**No. 21**

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THE JOVIAN

Volume Twelve DECEMBER, 1917 Number One

HOW TO TAKE GREATEST ADVANTAGE FROM RECENT AMENDMENT OF JOVIAN CONSTITUTION

FAST ACTION IS ESSENTIAL

By ELL C. BENNETT, Po. 3932-13.
MERCURY.

WHAT THE AMENDMENTS PROVIDE:

Amendments were passed at the Annual Meeting in New York providing for a material reduction in Central Office expense. This is accomplished by the elimination of certain items of expense not deemed absolutely essential, and not borne by any similar organization; by a return to the original agreement with the present Mercury, whereby he is not required to give all of his time to the affairs of the Order, and is compensated accordingly.

As nearly as it is possible to estimate, the total saving should amount to between eight and ten thousand dollars during the current year.

Other amendments were passed affecting the nomination and election of officers, the Past Jupiters' Association, and the relation between the Central Office and Local Leagues. It is with the last named that this article treats. The amendments were all published in full in the November JOVIAN.

Under the provisions of last year's Constitution, Chartered Jovian Leagues collected both local and Central Office dues. The latter amounted to four dollars per member and the local league retained fifty cents for each collection, remitting three dollars and fifty cents to the Central Office.

Under the operation of the recent amendments, Chartered Leagues will proceed as before but will RETAIN TWO DOLLARS (one-half of the Central Office dues), in place of fifty cents, remitting only two dollars to the Central Office, in place of three dollars and fifty cents.

Another amendment was passed waiving the initiation fee of The Jovian Order until next February first. This fee has always been ten dollars.

Because of these two last named amendments if is now possible and will remain so until February first, to make a candidate a member of The Jovian Order upon the payment of only four dollars for one years' dues, one-half of which may be retained by the Chartered League initiating him.

After February first the initiation fee will be five dollars, one-half of which is payable to the Central Office, and one-half retained by the local organization.

It must be remembered that the equal division of dues between the Central Office and the Local League APPLIES TO CHARTERED LEAGUES ONLY. It was so provided in order to bring about the rapid federalization of leagues through the Central Office as a clearing-house, resulting in standardization of methods and more effective operation, and to compensate such leagues for undertaking the collection of Jovian dues. Leagues that are not chartered do not collect the Jovian dues of their Jovian members.

The Sacrifice the Order has Made:

Even a superficial study of the effect of these provisions will discover that the Order has made not an inconsiderable sacrifice of income for the purpose of strengthening the Local League, and that unless the leagues appreciate that sacrifice and use its benefits to greatly increase their respective memberships the Order will face a serious decrease in its receipts with little or no good resulting.

If simply in order to secure one-half of the Jovian dues of their Jovian members leagues charter and do not use the opportunity afforded by this concession and by the waiver of the initiation fee to build a much larger membership of Jovians, then the Order will complete the year with only about the same number of members, from whom it will derive only fifty per cent. of its previous revenue.

If these concessions on the part of the Order are to accomplish the purpose for which they were made, they must induce not only the formation and chartering of leagues but intensive membership compaigns bringing in—note this carefully—EVERY DESIRABLE PROSPECT WHO CAN BE USEFUL TO THE LOCAL UNIT AND TO WHOM THE LOCAL UNIT CAN BE HELPFUL, and who can afford the expense of affiliation.

There have been more than a few Jovians in the past who have not given the Order their active support because they avowed that the Central Office was receiving too great a proportion of the dues paid by Jovian League members and the local league too little. The Order has met that objection and it is, we believe, not unreasonable to expect that it will now have the hearty support of every member in making the league plan of operation the great success we believe it merits.

The Need for Local Leagues and for Federalization:

The electrical industry at large seems to be practically a unit in the belief that local electrical leagues can be operated for the up-building of the industry. It would be difficult to discover good logic in any argument opposing the organization of any industry for constructive purposes, and the league idea is just that idea.

It would be even harder to disprove the logic in the obvious reasons why federalizing all these local units through a central clearing-house, standardizing their fundamental methods of operation, and making them easily accessible for use in national effort is not carrying the organization idea to the maximum degree of effectiveness. The Jovian Chartered League idea is just that idea.

In all candidness we believe we may accept those thoughts as basicly correct, and we have preached them in our magazine and printed matter and speeches for a number of years. The "growing pains" of many a thought basicly correct have, however, killed it in the making, and no one may deny we have had our troubles groping for the right method of applying our right principle. The way of the blazer of trails in unknown lands is ever an arduous one.

Our endeavors have brought us now to the method outlined herein, and it looks like a good method, a workable method and one that will accomplish what is desired, IF—it has active and continued support.

A famous player of whist once told the writer that almost any system was good if one stuck to it, and all were worthless if one did not. We are rather of the opinion that that idea could be

(continued on page nine)

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published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

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WORK FOR OUR WAR CRIPPLES

THE TASK of training crippled soldiers for suitable occupations is one that will soon be confronting our country. Other nations have taken up the question very seriously, and what they are doing in the work is being watched very closely for the information gained by their experience will aid us in preparing to take care of those who are sent back from the battlefields of Europe.

That the work should be handled systematically is without question. It will necessarily mean the co-operation of the industries of the country with the government to bring about the best results. The tabulation and classification of the injured with the object of selecting the best vocations for which they are fitted and their assignment to the proper courses of instruction to prepare them for the work, is a task that can only be handled effectively by preparing in advance for it.

According to English and Canadian reports, the work of training has cost very little and the demand for the trained men has been in excess of the number who have been given the instruction.

* * * *

BLACKLIST A WEAPON OF DEFENSE

WHAT the blacklist on German firms and German controlled interest in South America will result in is as yet but a matter of speculation so far as its relation to present business is concerned. That it will ultimately force a number of these concerns out of business seems very likely. But aside from the results there is every reason and justification for the action.

Throughout the entire duration of the war, even before our country's entry into it, the German interests of South America, Mexico and Cuba have been actively arrayed against the United States. While openly buying and trading with this country they have been spreading propaganda against American trade interests.

The influence of German banking institutions directed against goods of American manufacture has been felt in many ways and has provoked protests from a number of our concerns who have established trade in the Latin republics.

Like their masters in the fatherland, they have resorted to subterfuge that has eventually brought upon them the wrath of our government for their unscrupulous practices, and like their masters in the fatherland they have blundered ahead to the day of retribution.

Whether it be in war or commerce, there is but one way to deal with German intrigue, and that is with the mailed fist. We must stamp out the German undermining systems by drastic action. The day of according its votaries lenient treatment is past.

* * * *

OUR LOANS TO OTHER NATIONS

THE United States has loaned to other nations engaged in war with Germany something over three billion dollars, taking for the sums advanced the obligations of such nations, bearing the same interest and maturing at the same time as the Liberty Loan Bonds.

The wisdom of this policy is beyond question. By strengthening these nations and making them as powerful and as effective as possible, we are greatly aiding in the shortening of the struggle; we are doing much to insure an ultimate victory; we are doing only that which it is our duty to do toward our allies in this tremendous war against an autocracy which would debase and enslave all nations and men.

The fact that if we did not advance this money, much of the work which the allies are doing would have to be done with American money and American men, establishes clearly the intelligence and wisdom of our policy.

There is work to be done which requires the expenditure of blood and treasure. In making these money advances to Great Britain, France, Italy and other nations we are lending money which will be returned to us, instead of expending sums possibly as great, possibly greater, with no hope of return. In addition, we are saving the lives of American soldiers.

No policy the American Government has pursued is wiser or more truly economical and patriotic.—The Official Bulletin.

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How to Take Greatest Advantage From Recent Jovian Amendments

(continued from page seven)

taken home for roosting with not a little of our Jovian troubles. Perhaps had we put in as much effort pushing the system we had, as we did in trying to discover a different method we would have been farther toward our goal. The moral is: Get behind this new plan and stick to it until it is positively proved right or wrong.

The Opportunity for Local Leagues:

Local leagues have found it difficult, first to secure a large enough membership; second, to hold the interest and attendance of the membership if they get it; third, to finance their organizations. The opportunity offered now by the Jovian Order to cure or greatly abate all those troubles is a very real one.

First: Until February first a Chartered League may say to a desirable prospect: "Join us. We can give you membership in The Jovian Order without a cent of cost to you for initiation. We can give you membership in our local organization and in The Jovian Order for the same amount of dues that you would pay The Jovian Order alone if you were not a member of our league." (A league should find it possible to operate with one-half the Jovian dues, if it makes each entertainment, luncheon, etc., self-supporting. If it cannot possibly do that, then there are two alternatives: (a) A small additional charge for local dues, or (b) a sustaining membership by local firms.)

Second: Each Chartered League receives all the successful ideas and plans of every other Chartered League,—things to DO, to keep the league at work and interested. These are cleared through the Central Office and distributed in a bi-weekly news service called "GINGER".

Third: The allowance of one-half of all Jovian dues will practically, if not entirely, solve the financial problem.

How to Proceed, and what the Central Office will do to Help:

The Central Office has for free distribution a "Hand-book of Jovian Procedure," which gives in detail, the need for leagues, the advantages in federalization, methods of organization and operation, a model Constitution, and all other information that is needed. It stands ready to give individual attention to any requests for additional advice and help. It will send complete data and all necessary papers in connection with a league taking out a Charter. It will pay one-half of all dues collected to any league immediately upon acceptance of a Charter. It will furnish the "GINGER" service and other helpful material.

Last year the Constitution was amended to permit of the use of a "Lecture Form" of initiation, in place of the use of the regular ritual requiring costumes, scenery and a ceremonial. The Central Office will furnish this "Lecture Form," so prepared that it is an exceedingly simple matter to present it, together with detailed information as to its use for initiation purposes.

The combination of the new split in dues, the waiver of the initiation fee, and the "Lecture Form" of initiation removes every obstacle to the quick and easy organization of a large local league.

The plan is applicable to all conditions. For example we have:

(1) The city in which is now operative a Chartered League.

(2) The city in which is now operative a league that is not chartered—a big, successful league.

(3) The city in which is now operative a weak league that is not chartered.

(4) A city which has never operated a league of any kind.

(5) A city in which a league has been allowed to disband and in which Jovianism is dormant.

It will be seen that (1) can use what is offered to increase its membership and—because of receiving two dollars instead of fifty cents from its Jovian collections—decrease the individual dues payments by its members.

The big, successful league (2) that is not chartered can now affiliate with all other local leagues; receive the service of the Central Office; two dollars from every Jovian member, and also use what is offered to build its membership. It can do this without costing it or its members anything. It has all to gain and nothing to lose.

The city (3) that has a weak league not chartered is possessed of that sort of an organization because it has lacked the very elements this plan supplies. This is the remedy. We have previously pointed out why.

A city which has never operated a league (4) has probably not done so because unable to overcome the handicap of financing it and keeping it interested. The needed elements are now ready to hand.

The city (5) that has grown indifferent to Jovianism has probably done so because of the failure of a league, and that failure can without exception be traced to the troubles that the new plan eliminates.

It means just a little real leadership, the calling together of a few of the faithful who can accomplish any task that is set them, the skilful use of what the Order provides, and the thing is done.

Fast Action Required:

February first is a short six weeks ahead. If this plan is to be used it MUST BE USED NOW.

We have supplied the plan, we have given the incentive, we will furnish the tools; we can NOT supply the local leadership and "followship" that must be secured. We have, therefore, placed the entire matter before you with the earnest request that every local officer IMMEDIATELY organize to make use of this opportunity, and that every Jovian back the Order and his local officer in this sincere effort to make of our Order that well-loved, useful instrument of fraternity, goodfellowship and constructive endeavor which we have long held in our minds and hearts as the Jovian ideal.

* * * *

THE STORY OF THE TWO COMPETITORS

THEY had been friends since childhood, schoolday friends, college friends, but the little jinx that stirs up mischief between competitors got them to throwing ice-coated snowballs at each other. It took several shots of his barbed arrows to do it, but by hiding around in the trade preserves, he kept plugging away until he succeeded.

At first they merely spoke coolly when they met, then they took to avoiding each other, and it wasn't long before every one in the local industry knew they were carrying grouches against each other that were about as tasty as eight grains of quinine per capita.

For a while some of their mutual friends appeared in the role of pacificists, but finding no place to weigh anchor, they were compelled to steer back out of the zone of warfare.

Then the local ameliorators tried the influence of a harmony meeting or two, but the antagonists appeared at the functions singly. So they gave up the fight and sat back to watch the war clouds congregate.

Now appeared upon the scene A Good Customer from afar. He knew both, dealt with each in gross lots, paid promptly, and, incidently, belonged to the same organization of which both were members.

News of the declaration of hostilities had been wafted to his ears through his organization connection.

Also there appeared upon the scene A Bad Customer. He, too, bought from each in gross lots and paid because he had to.

"Here's a tip," he said to Good Customer. "Competitors are at war. Work one against the other for prices and you will profit greatly thereby. Tomorrow I will buy from them at less than cost, because I will tell each what the other has said about him."

Now Good Customer was a man who believed in peace—likewise in fair dealing. Instead of his thoughts running to unfair advantages, he preferred real friendships.

"Instead of promoting ill will, I would prefer to smooth out differences, for what are a few cents on an order," he counselled with himself.

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Turning to the telephone, he called One Competitor. "Be my guest at dinner, I wish to buy goods," he said.

And to Two Competitor he also telephoned an invitation.

When One Competitor arrived and observed plates laid for three, he was curious to know who the third guest was to be, A Good Customer told him very innocently.

When Two Competitor arrived and registered reserve, good customer registered obliviousness, even though the atmosphere was frigid.

Forthwith he made them talk business. Gave them each an order. Asked them to wait while he telephoned. Came back and found them threshing out their differences face to face, and when they had finished sent them home under the same lap-robe.

Consequently when Bad Customer came for his rakeoff he found the game over.

MORAL: When honest men fall out, get them together.

* * * *

NEW YORK LEAGUE APPLIES FOR JOVIAN CHARTER

THE New York League held its monthly meeting at Stewart's Restaurant, December 5, Jas. M. Wakeman, Po. 100, vice-president, occupied the chair.

Jovian Wakeman announced that since the previous meeting of the League the Board of Directors had met and applied to the Jovian Central Office at St. Louis for a charter.

After Frank E. Watts, Po. 1509-47, Past Jupiter Eleven, explained why this action had been taken, a motion was carried unanimously, endorsing the action of the Board of Directors in applying for the charter.

The chairman also announced that the Board of Directors had appointed a nominating committee, composed of the following members: George V. Pelz, Po. 18674, chairman; Martin Oberlander, Po. 2520, and Elliot Reid, Po. 12008.

This committee will nominate officers for the ensuing year. The election will be held in January.

George V. Pelz, Po. 18674, was elected First Tribune for New York.

James H. Betts, Po. 6765, Fourteenth Vulcan, chairman of the Liberty Loan Committee made a report showing the League had purchased liberally of the Second Liberty Loan.

The speaker of the day was Roy B. Woolley, Po. 19626, who has recently returned from service with the French Field Ambulance Corps. He made an interesting address, and gave the members an excellent idea of conditions existing at the French front.

* * * *

ELECTRICAL CREDIT ASSOCIATION MEETING

THE twenty-second annual meeting of the Electrical Credit Association was held at the Hotel LaSalle, in Chicago, November 15 and 16. The registration began at 11 o'clock, a. m.

At 12 o'clock the delegates repaired to the Hotel Sherman to the Jovian League luncheon.

The first business session was called to order in the Ball Room of the LaSalle Hotel at 2:30 p. m., and the reports of officers and committees were presented.

Statistics revealed by the secretary's report showed that the total number of slow and unsatisfactory accounts this year aggregated 78,558, amounting to $5,963,612.66. This was 620 fewer than for 1916 and 900 less than 1915, although the amounts involved totaled $130,000 over last year.

Following the secretary's report came the reports of territorial chairman, and a discussion of the various questions presented.

Friday was taken up with discussions of subjects set especially for that day.

The officers elected for the ensuing year are: President, H. O. Clare, General Electric Company; vice-president, H. E. Wilkins, Beldon Manufacturing Company; National Board, H. P. George, Beardslee-Chandslee-Chandler Manufacturing Company.

ARTHUR J. BINZ, Po. 1921-97

IF PAST Congressman, Arthur J. Binz, Po. 1921-97, had been born an Indian, those A. J. initials would stand for Always Johnny-on-the-spot.

Jovian Binz has never missed an Annual Meeting since he joined the Order, nor any other Jovian meeting of any importance where he was expected or could be useful to the Order.

Jovian Binz never missed an opportunity to play Man-Friday to every one of his Jovian friends who visited his good city. To express a wish in his presence when you are in the City of Houston, is first cousin to rubbing the lamp of Aladdin,—Binz vanishes, Binz re-appears, and, presto, there it is, just what the doctor ordered.

Jovian Binz is one of those old faithfuls who is often complimented by having some slacker say "he belongs to a clique that runs things all the time." Did you ever notice that everyone who DOES things is branded as belonging to a "clique?" Surely he belongs,—it's the "Coat-off Clique."

The latest little thing that the hero of these paragraphs has done is too present the Order with a set of interesting, old-timey, Jovian pictures, recently published by Past Jupiter Newning, handsomely mounted and framed.

More power to you, Always Johnny-on-the-spot, may your shadow never grow thinner and may your clique increase.

* * * *

CONFERENCE OF ENGINEERS IN WASHINGTON

A CONFERENCE of engineers was held in Washington on October 26, following a call issued by Ambrose Swasey to thirty-two of the various engineering bodies, requesting that each send at least two delegates. The object of the conference was as stated in the call: "The unification of relations of engineering agencies to the government."

After a statement of reasons for calling the conference was made by Mr. Swasey, deliberations extending over several hours resulted in a resolution being passed authorizing Col. J. J. Carty, Po. 19428, chairman of the meeting, to appoint a committee of five, including himself to confer with the Engineering Council, and the governing bodies of other organizations with the object of formulating recommendations to be presented to a later meeting of the delegates that would remove certain duplication of effort if adopted, and in general unify the relation of the engineering agencies to the National Government.

* * * *

EXPENDITURES WILL BE BELOW ESTIMATES

A FEELING of relief was experienced throughout the country at the statement of Secretary of the Treasury, McAdoo, in Baltimore before the Investment Bankers' Association on November 14, that the actual expenditures of some of the departments of Government were much less than the estimates the departments submitted in July last, and that the task of providing for the expenses of the Government for the fiscal year is not regarded by the Treasury Department as one which will in any way strain the capacity of the resources of the United States.

The Secretary said in part:

"Vague and unfounded apprehensions seem to exist in the public mind as to the extent of the financial requirements of the United States during the current fiscal year. It may be helpful to the country to know that these requirements have been greatly exaggerated, and that in the judgment of the Secretary of the Treasury there is no reason whatever for apprehension on this score. This opinion is based upon the latest estimates of our financial needs.

"The splendid success of the Second Liberty Loan shows that the people are fully determined to support the war and are prepared to make such sacrifices of luxuries, pleasures, comforts and conveniences as may be necessary."

The Secretary explained that his optimistic statement was based upon actual figures in hand. —The Official Bulletin.

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Personal Pointers

Years and faces come and go
Like the pictures in a show;
For in life's mutations here
Nothing stable doth appear.
Know we this, and yet we cleave
To the hopes we often weave,
That the pictures will retain
All their joy and pass again.

* * * *

W. D. Clark, Po. 7266, has succeeded R. S. Dunning, Po. 16471, as secretary of the Cleveland Electric Club, Jovian Chapter. Jovian Clark assumed his new duties on December 1.

* * * *

Guy R. Hastings, Po. 18762, formerly sales engineer for the National X-Ray Reflector Company, Chicago, has been made manager of sales for Chicago for that company.

* * * *

W. B. Miser, Po. 8941, manager of the Drumright division of the Oklahoma Gas & Electric Company, was recently elected president of the Drumright (Okla.) Rotary Club.

* * * *

J. T. Stewart, Po. 18950, formerly with the Electric Railway & Manufacturers' Supply Company, San Francisco, is now with the Standard Electric Construction Company of that city.

* * * *

George E. A. Fairley, Po. 10349, chief engineer of the Municipal Electric Commission of the City of Baltimore, has been commissioned a captain in the Engineering Corps of the U. S. Army.

* * * *

D. W. Smith, Po. 6399, has resigned as salesman for the New York office of the Robbins & Myers Company and is now connected with the American Thermostat Company of New York as its secretary.

* * * *

A. J. Gates, Po. 5620, has resigned his position with the sales department of the General Electric Company and has taken up the sale of industrial trucks for the Baker, Rauch & Lang Company, of Cleveland.

* * * *

H. A. Fife, Po. 7176, of the engineering department of the Commonwealth Edison Company, Chicago, has been commissioned a captain in the Eleventh Illinois Infantry, and is now in camp at Springfield, Ill.

* * * *

J. J. Carty, Po. 19428, chief engineer for the American Telegraph & Telephone Company, who was commissioned a major in the U. S. Signal Corps a few months ago, has been promoted to the rank of colonel.

* * * *

Sidney O. Vigo, Po. 11027, formerly general manager, commercial department, Middle West Utilities Company, Chicago, is now assistant to the vice-president of the American Public Service Companies, at Dallas, Tex.

* * * *

Walter S. Clark, Po. 1220, secretary of the James Clark, Jr., Electric Company, Louisville, Ky., vice-president of the Louisville Jovian League, is now its acting president, succeeding F. V. Gantt, Po. 12526, who has removed to Cincinnati.

* * * *

J. W. White, Po. 5804, formerly with the Westinghouse Electric & Manufacturing Company, and until recently with the Allis-Chalmers Company, at Pittsburgh, has been appointed manager of the Westinghouse Company's office at Detroit, Mich.

* * * *

D. C. Duland, Po. 11933, has resigned as works manager of the Sprague Electric Works of the General Electric Company, with which firm he has been connected for the past twenty-three years, to become president of the Mitchell Motor Car Company.

L. A. OSBORNE, Po. 3250-36, who was elected president of the Electrical Manufacturers' Club at its recent convention. Jovian Osborne is vice-president of the Westinghouse Electric & Manufacturing Company; vice-president of the New England Westinghouse Company; president of the J. Stephens Arms Company and vice-president of the Canadian Westinghouse Company. Directly after his graduation from Cornell University he became connected with the Westinghouse Company and has advanced through various positions to the one he now holds.

* * * *

J. C. Manchester, Po. 18940, is now district sales manager for the Economy Fuse & Manufacturing Company, with offices at 324 Rialto Building, San Francisco. Jovian Manchester was formerly connected with the Interstate Electric Novelty Company in that city.

* * * *

H. W. Magruder, Po. 15816, has been retained as manager of the Liberal, Kan., Light, Ice & Power Company plant, which was recently taken over by the Commonwealth Light & Power Company. He will also have charge of the company's properties at Dalhart.

* * * *

L. O. Veser, Po. 9670, who has been for the past two and a half years superintendent for the Aluminum Company of America and the St. Lawrence River Power Company, at Massina, N. Y., is now on the engineering staff of the Bond & Share Company, 71 Broadway, N. Y.

* * * *

John H. Baker, Po. 18977, who has been connected with the Diehl Manufacturing Company of New York City as sales manager for the past eight years has entered business for himself as manufacturer's representative and has opened offices at 95 Liberty Street, New York.

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Charles M. Welch, Po. 10327, formerly manager of the Indianapolis branch of the Wagner Electric & Manufacturing Company of St. Louis, has been made manager of the new sales office of that company recently opened at 116 Auburn Avenue, Atlanta, Ga.

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THOS. J. CREAGHEAD, Po. 3013, Sixteenth Triton, president and general manager of the Creaghead Engineering Company of Cincinnati, Ohio. Jovian Creaghead has been a loyal supporter of the Order since his affiliation in 1910, and served as First Tribune for Cincinnati last year.

JAS. T. SWEENEY, Po. 14405, who for the past five years has been chief accountant for the Northern Ohio Traction & Light Company at Akron, Ohio, has been appointed auditor for the company. He has been connected with the company in different capacities for the past eleven years.

* * * *

JAMES W. MOREY, Po. 2781, who was formerly connected with Henry D. Sears Company, has been appointed Eastern sales manager for the Multi-Refillable Fuse Company, of Chicago, and has established headquarters as a branch office of the company at 120 Liberty Street, New York City.

* * * *

FRANK VAN WINKLE, Po. 12965, secretary-treasurer The Post-Glover Company, was elected president of the Cincinnati Jovian League at the annual election held November 1. JOSEPH C. BOWMAN, Po. 6275, manager electric department H. W. Johns-Manville Company, was elected secretary.

* * * *

H. N. GOODELL, Po. 9559, who has been manager of the Omaha branch of the company for a number of years, has been made district manager of the Western Electric Company. Included in his division is the Minneapolis branch. Jovian Goodell will continue to make his headquarters at Omaha.

* * * *

J. R. MURPHY, Po. 15817, has resigned as vice-president and manager of the Great Bend Kas., Water & Electric Company. Jovian Murphy has been connected with the company since 1912, when he assumed its management. He was formerly superintendent of the Hoisington Electric & Ice Company.

* * * *

F. A. C. TOCQUE, Po. 13340, manager of the commercial department of the Fort Smith (Ark.) Electric Light, Power & Traction Company, has sailed for England where he will enlist in the British Army. Jovian Tocque was formerly connected with the Louisville (Ky.) Gas & Electric Company as district salesman.

* * * *

J. F. SELLS, Po. 8797, formerly connected with the engineering staff of the National X-Ray Reflector Company, Cleveland, is now consulting illuminating engineer of the new business departments of the Henry L. Doherty Company, and is at present located at Mansfield, Ohio, with the Mansfield Electric Light & Power Company.

* * * *

JOHN M. RODGER, Po. 10998, has been made Western manager for the Electrical World and Electrical Merchandising, with headquarters at Chicago. He was manager of the Cleveland office of the two publications. Jovian Rodger succeeds Past Jupiter SAM A. HOBSON, Po. 3V, who, as announced in the last issue of The JOVIAN, had resigned.

* * * *

J. D. NICHOLSON, Po. 15820, elected president of the Kansas Public Utilities Association recently, has been superintendent and manager of the Newton, Kan., electric properties for twenty-four years. Under his supervision the power plant and distribution system have been rebuilt several times, and the gross sales of energy have increased from $290 to $5,500 a month.

* * * *

F. V. GENTT, Po. 12526, manager of the Louisville, Ky., branch of the General Electric Company and president of the Louisville Jovian League, has gone to Cincinnati, Ohio, where he will have charge of the central station and electric railway sections of the company. Jovian Gantt was tendered a farewell luncheon on the eve of his departure by Louisville Jovians, who presented him with a handsomely engraved cigarette case.

* * * *

E. M. WALKER, Po. 10326, has been appointed general manager of the Terre Haute division of the Terre Haute, Indianapolis & Eastern Traction Company, and will have full charge of the electric lighting and power work of Terre Haute and surrounding towns, as well as the street railway and interurban systems of the division. Jovian Walker was general manager of the Dubuque Electric Company, from which position he resigned last September.

* * * *

E. H. SMITH, Po. 4391, president of the Winnipeg Jovian League during the past year, has been transferred to the managership of the new branch of the Canadian Westinghouse Company, Ltd., recently opened at Fort William. We reported, in the last issue, that Jovian Smith had been made manager at Winnipeg, but this was an error. He has been transferred from Winnipeg to Fort William to look after the company's interests at the latter point.

* * * *

E. BURT FENTON, Po. 18446, has been appointed publicity agent for the Northern Ohio Traction & Light Company with headquarters at Akron, Ohio. Jovian Fenton was formerly publicity agent for W. S. Barstow & Company. He was previously connected with the editorial department of a daily newspaper, having first come into the utilities field with the Sandusky Gas & Electric Company, for which he conducted the publicity work through two municipal ownership campaigns.

* * * *

R. S. DUNNING, Po. 16471, has resigned as secretary of the Cleveland Jovian League, and is engaged in sales promotion work with the Forest City Rubber Company, of Akron, Ohio. After familiarizing himself with the details of the work at the company's home office, he will establish permanent headquarters at 1276 Ontario Avenue, Cleveland. Jovian Dunning has rendered valuable service in the establishment of the Cleveland League and has been very active in Jovian affairs both in Cleveland and the surrounding territory, and he will be greatly missed by the club members. He has the best wishes of a host of friends for his success in his new position.

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NEWS OF JOVIAN LEAGUES

Cincinnati The meeting of October 29, was presided over by president T. J. Creaghead, Po. 3013, Sixteenth Triton, who gave an interesting description of the Jovian Convention. He explained the new adjustment of dues which provides that the local chartered league retain $2.00 of the $4.00 paid for Jovian dues, that the initiation fee would be suspended until February 1, and would be $5.00 after that date.

A motion was made that several changes be made in the constitution of the club and was adopted. A motion was also adopted that an invitation be sent to the officers, directors and members of the Cincinnati Electric Club, inviting them to meet with officers and directors of the Cincinnati Jovian Electric League to consider the consolidation of two organizations under the more Democratic Jovian Electric League.

There were thirty-eight members and visitors in attendance at the luncheon meeting of November 19. Frank D. Van Winkle, Po. 12965, the newly elected president of the League, presided. He stated that the Cincinnati Electric Club had appointed a committee of three to meet a committee of the League's members with the purpose of consolidating the two clubs. President Van Winkle appointed as a committee: B. M. Downs, Po. 2508, Jos. C. Bowman, Po. 6275, and Weldon W. Freeman, Po. 1899V.

A. C. Beattie, Po. 1823, Ohio Director, National Electrical Contractors' Association, gave an interesting account of the steps being taken by the contractors to co-operate with other branches of the industry.

* * * *

Winnipeg At the bi-weekly luncheon of the Winnipeg Jovian League, November 1, Major B. A. Cousin, made an interesting address describing experiences at the western front. He also gave an outline of his work as an artillery observer.

Former Secretary-Treasurer of the Winnipeg Jovian League, W. E. Skinner, Po. 4747, now of Minneapolis, made a talk on the great work being done in his city and other points in connection with war preparations. He gave a detailed description of the manner in which the Second Liberty Loan was handled by Citizens' Committees.

A representative body of Winnipeg Jovians attended the bi-weekly luncheon November 15. Comptroller-General J. Gordon Steele was the speaker of the occasion, taking for his subject, "The Functions of the Auditor in Public Affairs." He dealt fully with the different phases of a modern auditor's services, making a comprehensive address.

B. F. Griggs, auditor for the Greater Winnipeg Water District gave a brief outline of the auditor's work in connection with the project.

The Winnipeg Jovian League forwarded Christmas parcels to every member fighting at the battle front. It is also endeavoring to keep as closely in touch with its soldier members as possible. Like the Jovian Order, the League is carrying all of its enlisted members without the payment of dues during their term of enlistment.

A schedule for the Bowling Tournament is being arranged, and will be started in the near future.

* * * *

Chicago William K. Skaggs, well known politician, economist and lecturer, made an address before the Chicago League, October 25, on "German Conspiracies in America."

Freedom of the Seas was the subject of an address before the League November 1, delivered by Julian B. Arnold, son of the late Sir Edwin Arnold, and one of the founders of the British Navy League. The luncheon was held in the Louis XVI room of the Hotel Sherman and was attended by a number of lady relatives and friends of the members. The orchestra of the Chicago Telephone Company furnished delightful music for the affair.

Announcement was made that arrangements had been made by chairman of the Speakers' Committee, Blanchard, with the American Institute of Electrical Engineers and the Western Society of Engineers to hold a joint meeting with the Jovian League December 20.

JOSEPH INSULL, Po. 16729, Sixteenth Mars, assistant manager, Pittsfield Works, General Electric Company. With men of Congressman Insull's type at the head of affairs we may rest assured the Order will move forward in a constructive manner.

A motion was passed to waive the initiation fee until January 1, and admit members on the payment of dues for the last quarter of 1917, and the entire year of 1918.

S. A. Baldus, managing editor of the Extension Magazine addressed the meeting of November 8, on "The Real Reason for the High Cost of Living."

Lieutenant J. D. Cameron, who has spent one year in the front line trenches in France and was twice wounded was the speaker at the meeting of November 15, described in detail how a trench raid is made. The meeting was a joint one held in conjunction with the Electrical Credit Mens' Association. President H. A. Mott, Po. 17507, welcomed the delegates and their wives, and was responded to by Mr. Miner, with an address of thanks for the hospitality extended by the League.

L. A. Busby, of the Street Railways Company, delivered a stirring address on the worthiness of the Y. M. C. A. War Fund Campaign.

Godfrey H. Atkin, of the British-Canadian Recruiting Mission, told of the success of the mission in securing recruits at the rate of about 250 a week.

Mrs. L. C. Spake, volunteered to make the Club's Service Flag.

* * * *

Kansas City An informal Get-together Meeting was the name given to the Kansas City League luncheon meeting of November 16. Two new members were present. They were J. F. Porter, Po. 2097-70, and H. C. Blackwell, Po. 3957, president and general manager of the Kansas City Light & Power Company.

Announcement was made that the annual dues of the League would be $5.00, which includes Jovian membership dues. This is made possible by the new arrangement by which the League retains $2.00 of the $4.00, Jovian dues.

It was suggested by the Executive Board that the meetings be held monthly instead of bi-monthly this year. A vote on the question was submitted to the members.

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Milwaukee November 8, the Milwaukee League inaugurated its company meetings. Cutler Hammer Mfg. Company was in charge, with George J. Kirchgasser officiating as director. Wm. Fernow was the speaker, taking for his subject, "Electric Magnets." The meeting was a decided success, and it was necessary to lay additional plates for the attendance.

The meeting of November 22, was in charge of the Mechanical Appliance Company, with I. R. Douglas, Po. 18360, presiding as chairman. Louis Reinhart, the speaker took for his subject, "Electric Motors."

Announcement was made that the meetings of December 6 and 22 would be in charge of the Home Wiring Company and the Universal Indicator Company., respectively.

* * * *

St. Louis Dr. Charles F. Aked, former pastor of Rockefeller's church, and a member of the Ford Peace Committee, and who has recently returned after a year's sojourn in Armenia, graphically described Turkey's treatment of those unfortunate people at the St. Louis luncheon of November 6.

George E. Cullinan, Po. 2134, presided as chairman of the meeting.

An invitation was extended to members of the Chamber of Commerce, and a number from that organization attended the meeting.

November 13, a splendid outline of the work being done in our camps and cantonments by the Y. M. C. A. was given in an address by P. P. Bevis, who has been in charge of the Y. M. C. A. branch at Fort Sill.

E. H. Waddington, Po. 5176, vice-president of the League presided as chairman.

Announcement was made by G. H. Cohn, Po. 6630V, chairman of the Educational Department that three classes, electrical salesmanship, credit men's class and the public speaking class were assured by the number enrolled.

Moving pictures of the Canadian Rockies and Alaska were exhibited at the meeting of November 20, the films were furnished by the Canadian Pacific Railway Company. C. B. Kennedye, Po. 13814V, presided.

Lieutenant J. D. Cameron, fifth Canadian Battalion, First Division, who served one year in the first line trenches on the Ypres Salient, and spent one year in the hospital as the result of a wound received at the battle of the Somme, gave a detailed description of trench warfare in an address before the League November 27.

General E. J. Spencer, Po. 9079, presided as chairman and paid a glowing tribute to the officers who have been in charge of the British-Canadian Recruiting Commission in St. Louis.

* * * *

Cleveland Prof. J. L. Borgerhoff addressed the League meeting October 18. Announcement was made that the League had an electric flag and volunteers were wanted to put it up. Also that the Bowling league had started its season and had bowled three games.

Owing to inclement weather there was a small attendance at the meeting of November 21. G. G. Williams gave an interesting talk on "Modern Agricultural Methods and Experiments." It was announced that the members of the League identified with the Y. M. C. A. campaign were meeting with great success.

* * * *

San Francisco San Francisco Jovians held a smoker for the benefit of the Red Cross on the evening of November 1. The affair was held at the Elks Club. The program consisted of a number of interesting features, included among which were several addresses and a machine gun exhibition.

CONDITIONS AFFECTED BY WAR

According to the railroads' war board the traffic handled during the five months, April to August, 1917, inclusive, was 50 per cent greater than that handled during the same period of 1915, and 16 per cent more than during the same period of 1916. It exceeded the total traffic moved during the entire year of 1914.

Perhaps the most remarkable figures are those regarding the movement of coal. During the six months, May to October, inclusive, there were moved 150,000 carloads more of anthracite coal than was handled during the same period in 1916.

A total of 116,000 carloads of freight have been hauled for the Army and National Guard camps and 17,000 for the Shipping Board.

In addition to this there has been the work of handling the troops and troop supplies amounting to 75,000 carloads a month.

Summed up the railroads have increased their efficiency to a wonderful extent under the stress of war conditions.

* * * *

The number of bales of cotton ginned in the United States from the 1917 crop, prior to November 14, was according to statistics compiled by the Bureau of Census, Department of Agriculture, 8,559,390. Cotton ginned during the same period last year was 9,615,003 bales. The total crop last years amounted to 11,363,915 bales.

* * * *

A more complete embargo on the exportation of iron and steel products was established by a Canadian order in the council of November 15, published as Customs Memorandum No. 2138B.

The following articles were placed under prohibition of exportation to all destinations abroad other than to the United Kingdom, British possession and protectorates: Pig iron, steel ingots, billets, blooms, bars and slabs, iron and steel plates, iron and steel shapes (comprising beams, channels, angles, tees and zees), iron and steel fabricated for structural work and shipbuilding.

Combination food sales were prohibited by the United States Food Administration and retail dealers were instructed not to sell sugar in combination with other food-stuffs, except corn meal in a recent act. The Administration stated the reason for its act was that such combination sales resulted in purchasers buying more food, than they actually needed. But the combination excepted would promote the use of corn meal and effect a saving of wheat.

* * * *

The Council of National Defense has issued a circular stating that the Navy is in need of binoculars, spyglasses and telescopes. The supply of lenses in the past have come chiefly from Germany and France and the American resources are inadequate to fill the present greatly increased demand. In this emergency the Navy counts upon the American public to contribute its stock of privately owned observation glasses with the same generosity that has marked its donation of other valuable things.

The Navy Department will pay $1.00 for each binocular, spyglass or telescope accepted. They should be tagged with the owner's name and address and forwarded direct to Hon. Franklin D. Roosevelt, assistant secretary of the Navy, care Naval Observatory, Washington, D. C.

All of those received will be promptly acknowledged, and those not available will be returned to their owners.

* * * *

WORTH THE COST OF THE WAR

I SUPPOSE not many fortunate by-products can come out of awar, but if the United States can learn something about saving out of this war it will be worth the cost of the war; I mean the literal cost of it in money and resources. I suppose we have several times over wasted what we are now about to spend. We have not known that there was any limit to our resources; we are now finding out that there may be if we are not careful."
—From President Wilson's speech to the War-Saving Committee.

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OCTOBER REJUVENATIONS

BENTON HARBOR

The Rejuvenation held at the Fairplain Auditorium, Benton Harbor, Mich., on the evening of October 26, brought together an enthusiastic assembly of Jovians. There were ten candidates to be initiated and First Tribune R. E. Curtis, Po. 19050, had arranged for the staging of the ritual complete.

Among the prominent guests to participate in the affair were F. T. Buckley, Po. 19923, Detroit, and Charles Locke Eldridge, Po. 19925, Grand Rapids.

The speakers at the Joviation were J. A. Cavanaugh, Po. 11199, Statesman for Michigan, and W. J. Trott, Po. 2685, Fifteenth Triton.

Music was furnished by the Jovian Orchestra.

Following is the Degree Team: Jupiter, R. E. Curtis, Po. 19080; Neptune, H. W. Quackenbush, Po. 19054; Pluto, E. F. Paulson, Po. 17233; Vulcan, C. M. Poole, Po. 19053; Mercury, R. J. Hadlow, Po. 15530; Hercules, Roy Newman, Po. 19658; Mars, Earl Frakes, Po. 15528; Apollo, E. Welkes, Po. 15540; Avrenim, F. S. Hegerman, Po. 1582; Imps, Thos. Daniell, Po. 19051, John C. Rohl, Po. 16520, and W. P. Swartz, Po. 14782.

* * * *

MASSILLON, OHIO

Stark County Jovian League, No. 8, held a Rejuvenation and Joviation at Massillon, on the evening of October 12 at the Boss Hotel. There were seven candidates and about thirty-five members present.

The lecture form of the Ritual was used to confer the initiation, First Tribune L. J. Lemen, Po. 3195, officiating.

After the initiation ceremony, the members engaged in a general discussion of matters to be considered by the League to advance the cause of Jovianism in Stark County.

It was generally felt that the prospect of accomplishing a number of beneficial results for the industry is exceedingly good and movements will soon be inaugurated to realize on the opportunity.

* * * *

NEW JERSEY ASSOCIATION ANNUAL CONVENTION

THE third Annual Convention of the New Jersey Utilities Association was held at the St. Charles Hotel, Atlantic City, October 26 and 27.

The speakers and their subjects were: Ralph E. Donges, president Board of Public Utility Commissioners of New Jersey; "The Proper Relation Between Public Utilities and the Public Utilities Commissions;" Thomas Conway, Jr., professor of finance, University of Pennsylvania, "The Problem of Higher Operating Costs and Commission Control of Rates;" John L. O'Toole, Public Service Corporation, Newark, "Public Utilities Doing Their Bit;" George W. Fuller, consulting engineer, New York, "Irregulation of Various Obligations for Adequate Utility Facilities Under War Conditions;" T. H. Dudley Perkins, of Perkins, Bioren & Company, bankers, Philadelphia, "The Financing of Public Utilities;" Ralph J. Baker, Harrisburg, Pa., "The Binding Force of Term Contracts with Special Relation to Public Utility Rates;" Dr. F. Herbert Snow, Po. 14956, chief engineer, Public Service Commission of Pennsylvania, "The Valuation of Intangibles for Rate-Making Purposes," and W. H. Roth, Philadelphia, "Utility Troubles—Their Causes Effects and Remedies."

* * * *

It is easy in the world to live after the world's opinion. It is easy in solitude to live after our own. But the great man is he, who in the midst of the crowd, keeps with perfect sweetness the independence of solitude.—Emerson.

OBITUARY

HENRY R. FORD, Po. 469

HENRY R. FORD, Po. 469, member of the firm of McCarthy Brothers & Ford, died at his home in Buffalo, N. Y., October 31. Jovian Ford had been a member of the Order since 1906, having been initiated at the Rejuvenation held at Niagara Falls in September of that year. After completing a course in engineering at the Pratt Institute, of New York City, he entered the electrical industry as assistant superintendent for the F. P. Little Electric Company, of Buffalo, in 1893. In 1898 he started the firm of McCarthy Brothers & Ford. Besides being an active member of the Jovian Order, he was a member of the American Society for Mechanical Engineers, Engineer Officer of the New York Naval Militia, member of the Buffalo Club, Park Club, Wanakah Country Club, vice-president the Buffalo Rotary Club, and member of the Chamber of Commerce.

* * * *

WALTER LLOYD MASON, Po. 1836, died at his home in Philadelphia, November 15, after a short illness. He was thirty-seven years old at the time of his death and had been with the Philadelphia office of the Edison Lamp Works for about ten years in the capacity of salesman. Jovian Mason enjoyed the enviable distinction of being one of the squarest and most popular men in his line and he leaves many warm friends who are deeply grieved at his loss. A wife and three small sons survive him and The JOVIAN extends to them the heartfelt sympathy of the fraternity.

* * * *

EDWARD D. FLOYD, Po. 706, of the firm of Chandler & Floyd, New York, died at his home at 405 Elm Street, New York City, October 17, after an illness lasting but three days. Jovian Floyd was in his fifty-first year, and was widely known in the steel trade of the east. Besides being a member of the firm of Chandler & Lloyd he was a director of the Alleghany Steel Company. In addition to his membership in the Jovian Order, he was affiliated with the Westfield Golf Club, Baltusrol Golf Club, Schenectady Club, Pittsburgh Athletic Club and the Engineers' Club of New York. He leaves a wife, one son and a sister to whom we extend the sympathy and condolences of the Order.

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PROMPT SI

The manner of settlement of a rec
brought forth the following commer

"We are pleased with the record
"We delivered to Mr. D. A. St
blank required by Mr. Stoker, at 4 p
"This morning Mr. Stoker han
"It is unusual to receive payme

An Accident

Especially a fatal one, to a friend, shocks us into a realization of our responsibility to those dependent upon us!

Such satisfaction is th
Central Office to furnish f
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In every case, withou
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any other similar insurance,
insurance for the intereste
booster for this big Jovian b

Complete infor

Clip and Mail the Coupon Today

IF YOU SO DESIRE, DATE YOUR APPLICATION TO TAKE EFFECT WHEN SOME OF YOUR PRESENT INSURANCE EXPIRES — PAY NOT UNTIL YOU RECEIVE THE POLICY.

THE JOVI

SYNDICATE TRUST BUIL

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TTLEMENT

t well-known Jovian's death claim by his administrator:

ne and the brief claim blanks required in payment of claim for accidental death.
, representative of the Corporation, claimant's certificate of death, the only claim
. yesterday.
us the Corporation's check for $5,000, payment in full.
so promptly and with complete absence of 'red tape.'"

SATISFACTION

natural outcome of the successful endeavor of the Jovian
t-class insurance to members of the Order at the minimum
um of benefit. Remember, every dollar of the premium
rance obtainable for the money.

exception, where we have had an opportunity to show
s, the comparative analysis
over the traveling men's and
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Jovian, but have made a
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AN ORDER

NG ST. LOUIS

EVERY DOLLAR YOU INVEST IN JOVIAN INSURANCE, RELEASES NEARLY ANOTHER DOLLAR FOR YOUR OTHER PRESSING NEEDS.

Sign—Tear Out—Mail NOW!

THE JOVIAN ORDER

GENTLEMEN:

Send me complete information relative Jovian Accident and Health Insurance at greatly reduced rates.

(Signed) .....

(Address) .....

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The Return Circuit

Edited by W. R. Joyes, Po. 13813.

The Fight We Wage

By W. R. J.

We have no hymn of hate to urge a blow,
No lust for blood, nor seek to perpetrate,
Atrocities upon a vanquished foe
Some mad, desire to satiate.
We do not strive to sack some treasury,
Nor covet wares nor fertile lands,
Nor find we joy in others' misery,
Nor seek to wreak destruction with our hands
Of vineyard, edifice or shrine,
That with his toil our fellow man has wrought,
Nor do we crave to hear the whine,
Of foes (however vicious) we have fought.
We hold no wish to boast malignant deeds,
To sing of laurels wet with human gore,
To lord above the fallen when he pleads,
To joy because his honor is no more.

Some mortal called this butchery a game—
A ghastly game that reeks with human spleen—
We do not seek to justify the name,
But, if a game, we'll strive to play it clean.
Clear to the end where a decision lies,
Thrice armed with justice and with charity
We fight in answer to the pleading cries
Of outraged nations, for humanity.
We face the task, and well we know the price
Is sorrow that will tax our fortitude,
And very calmly we have made the sacrifice—
A calmness that may not betray our mood—
But to the end where a decision lies
Our resolution points us to the goal
Where outraged law and justice shall arise,
To free the earth of war's destructive toll.

* * * *

If Joy Should Come

By W. R. J.

If joy should some day come to you
And say, "here with you will I dwell
As long as you will treat me well,"
Would you prepare your house anew,
Most eagerly?

If joy should come and softly say,
"I will abide within your heart,
And henceforth nevermore depart,
If you will keep all sin away,"
Would you agree?

If joy should ask you quietly
To sweep your soul and sweep it well
And make of it a pleasant place to dwell,
Where it might live contentedly,
Would you obey?

Would not it be a greater joy instead
Were you prepared to entertain
The guest and ask it to remain,
If it should come unheralded
On any day.

Appearances from High Altitudes

CAMOUFLAGE.

TO BEGIN with Camouflagology is nothing more nor less than the art of deception. That is, the art of making things appear to be what they are not, where they are not and consequently when they are not.

As an art it is not new. (I do not know that any one claims it is new, but I wish to make that statement in case it should be claimed.) It has been right on the job all the time, but it has been operating under assumed names.

There are several reasons why it has operated incognito. The principal reason is that up till the present war it never had the opportunity to appear in a heroic role in the cast of life. Heretofore it has been known by the titles of "Deceit" and "Subterfuge," and, naturally, with such appellations attached to it, what show did it have to get in the limelight as a hero?

But the great war brought the opportunity for which it had long waited. Throwing aside its disreputable titles it stepped boldly forth and entered into the strife to gain a quick and perhaps a lasting fame?

We do not begrudge Camouflage the distinction it has won. Far from it. We are very glad, indeed, to welcome it as an ally on the right side even though it took it a long time to get there.

However, its practices in the past have been somewhat annoying. Look at the way it has treated the feminine sex of our race. Follow them through the different eras of the earth's history. Naming at random, it has compelled us to pass through periods dominated by balloon-sleeves, towering head-gear that swept the cobwebs from the ceiling, that monstrous structure the bustle, and that wonder of all camouflagic art, the hoop-skirt, that inspired one of our noted song-writers to compose that vocal masterpiece, "Alice Where Art Thou?"

Nor has it ceased its activities in domestic circles to-day. Although fighting without gallant armies at the front, evidence of its artistic creations are apparent on every hand. Were the world-famed Rubens, or the great Healy to return, could they hope to reproduce the facial colorings of this age?

Nor are its activities confined alone to the feminine sex. Man has frequently made use of it in his domestic life. Perhaps not so much for personal adornment as to inflate his importance. Were the camouflage that covers individual efficiency mistaken for the real, no business corporation could possibly operate without at least forty offices for first vice-presidents; there would be so many noble statesmen serving their nation in official capacities that no one would be left at home to grow peanuts, and every lady who is led to the altar would be obsessed with the firm belief that she was to be the bride of the greatest masculine production of all ages.

In fact we are really glad to note that Camouflage is near the first line trenches.

* * * *

The Lay of the Huntsman

By W. R. J.

Oh, for the joy of the open field,
And the fan of a clear cool breeze!
To trudge away in the early morn,
As the sun peeps o'er the trees.
When the bob-white runs for his hiding place
And the rabbits dart away—
Then it's oh, for the clear crisp morning air
And the frost-flecked fields of gray!

When the dry grass whips on the corduroys
And the scenter sniffs the air;
When the stubble fields stretch far ahead,
With miles of space to spare;
When you push aside the strands of wire
And pause to choose your way,
Then it's Oh, for the whirr of a rising bird
O'er the frost-flecked fields of gray.

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DALLAS GETTING READY TO BACK JUPITER STRICKLAND'S ADMINISTRATION

A DRIVE FOR NEW MEMBERS TO BE INAUGURATED

By H. S. Cooper, Po. 365

AN INVITATION dinner at the Adolphus Hotel was tendered by Jupiter J. F. Strickland, Po. 30-103, November 30, to prominent Jovians of Dallas to formulate plans for a state wide campaign for new members of the Order and provide for holding the 1918 Jovian Convention in Texas.

Those present were Jupiter Strickland, who presided as chairman; C. W. Davis, Po. 58; R. Meriwether, Po. 4983; H. S. Cooper, Po. 365; F. M. Lege, Jr., Po. 131-96; C. A. Calder, Po. 120-78; Burr Martin; W. B. Head, Po. 139; Chas. L. Martin, Po. 176-56V; M. F. Sterrett, Po. 93, Ninth Hercules; B. K. Howard, Po. 1231; R. S. Wakefield, Po. 2606; H. E. Hobson, Po. 56, Tenth Neptune; C. W. Hobson, Po. 1, Past Jupiter 1; R. W. Van Valkenburgh, Po. 1302; Ell C. Bennett, Po. 3932-13V, Mercury, and Arthur J. Binz, Po. 1921-97V, Thirteenth Neptune.

After an interesting discussion it was decided that the present "Dallas Club and Jovian League" should be changed, effective January 1, 1918, to a "Dallas Jovian League", legally chartered by the Jovian Order. The present non-Jovian membership of the club to be retained as auxiliary members of the new League.

It was also determined that a working board of directors (vice-presidents) should be immediately formed and that an early meeting should be called to form the necessary committees to increase the Texas Jovian membership, and to start, at once, to provide ways and means for a large successful Jovian Convention in one of the large cities in Texas, in October, 1918.

At the regular meeting of the club, December 3, the club was formally changed as noted above to the Dallas Jovian League, to take effect January 1, and the following officers were elected: President, F. R. Slater; senior vice-president, P. K. Baker; directors, consisting of vice-presidents: C. W. Davis, Po. 58; H. P. Hess, Po. 4981; H. E. Hobson, Po. 56; Hartwell Jalonick, Po. 1255; Fred M. Lege, Jr., Po. 131-96; Charles L. Martin, Po. 176-56V; Richard Meriwether, Po. 4983; E. M. Powell, M. F. Sterrett, Po. 93, and R. S. Wakefield, Po. 2606. Secretary, R. S. Cooper, Po. 365; treasurer, J. B. Walker, Po. 10692.

At the luncheon meeting of December 10, the following chairmen and committees were appointed:

Constitution and by-laws, E. M. Powell, chairman.

Non-resident membership, Chas. L. Martin, Po. 176-56V, chairman.

Dallas membership, Fred M. Lege, Jr., Po. 131-96, chairman.

Finance, P. K. Baker, chairman; J. B. Walker, Po. 10692, treasurer.

Rejuvenation, R. S. Wakefield, Po. 2606, chairman; J. G. Barrett, Po. 3189.

Convention, Chas. W. Davis, Po. 58, chairman.

Publicity, R. Meriwether, Po. 4983, chairman; Dan G. Fisher, Po. 2173.

A. E. Warner, Po. 6024, and Homer Fischer.

Program, Hartwell Jalonick, Po. 1255, chairman; H. C. Bramwell.

Reception, H. P. Hess, Po. 4981.

With this organization, the Dallas Jovian League expects to set a pace for Jovian activity that if emulated by Leagues in other cities will result in a greatly increased membership.

It is the purpose of the entire membership here to assist Jupiter Strickland in every way possible in his endeavor to make this a banner year in the increase in Jovian membership in his own state and the Southwest, and to show a decided increase in all Leagues before the October Convention.

* * * *

Wisdom is knowing what to do next, skill is knowing how to do it, and virtue is doing it.—David Starr Jordan.

LIST OF STENTORS

CHIEF STENTORS

FOURTH DISTRICT
ROBERT L. CUNNINGHAM, Po. 4749,
Care J. F. Buchanan & Company, Philadelphia

FIFTH DISTRICT
E. F. MEYERS, Po. 6170,
345 Federal Park Place, Fort Wayne, Indiana

THIRTEENTH DISTRICT
RICHARD F. BEHAN, Po. 9315,
Care Westinghouse Electric & Manufacturing Co., San Francisco, Ca.

SIXTH DISTRICT
GEORGE E. WATTS, Po. 12482
Care Electric Service Supplies Co., Atlanta, Ga.

CHARTERED JOVIAN LEAGUES

Cincinnati	Charter	No. 1
Kansas City, Mo.	"	No. 2
Pittsburgh	"	No. 3
Minneapolis	"	No. 4
St. Joseph, Mo.	"	No. 5
Louisville, Ky.	"	No. 6
Stark County Jovian League Comprising the towns of Massillon, Canton and Alliance, Ohio.	"	No. 7
Tulsa, Okla.	"	No. 8
Eau Claire, Wis.	"	No. 9
Harrisburg, Pa.	"	No. 10
Wichita, Kan.	"	No. 11
Winnipeg, Man.	"	No. 12
Bay City, Mich.	"	No. 13
Milwaukee, Wis.	"	No. 14
Port Arthur, and Fort William, Ont.	"	No. 15
Oklahoma City	"	No. 16
Galveston, Texas	"	No. 17
Muskogee, Okla.	"	No. 18
Mansfield, Ohio Comprising Richland and Ashland Counties	"	No. 19
St. Louis	"	No. 20
Southwestern Michigan Jovian League Benton Harbor, Michigan	"	No. 21

THE NEED OF ECONOMY

WHEN we put a million and a half soldiers in the field we withdraw those men from productive enterprises. They do not while they are actually in training or in service produce anything. They do, on the other hand, consume much. There is nothing more expensive on earth than to support and maintain a great army in the field, especially if it is on the fighting line. The attrition of supplies and everything else is tremendously great when we have a fighting army in the field.

America is the one great remaining storehouse in the world of supplies and credit. We must maintain and make effective as possible our own soldiers and the soldiers of those nations who are fighting for us. We must therefore draw as little as possible upon our common store of supplies and money. The more we lessen our domestic demand the more we can contribute to the support and effectiveness of our allied armies.

Economy is now a national duty, such a duty upon the people at home as fighting is upon those Americans who are bravely offering their lives for the honor of America and the preservation of liberty and justice.

—The Official Bulletin.

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PRACTICAL LESSONS IN ELECTRICITY

LESSON THIRTY-TWO

SWITCHBOARDS AND SWITCHGEAR

By TERRELL CROFT

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THE DISTINCTION between "Switchboard" and "Switchgear" should be understood. By definition switchgear constitutes the parts or appliances, collectively, which make up a complete equipment for controlling and metering the electrical energy output or input of an electrical station or some electrical device.

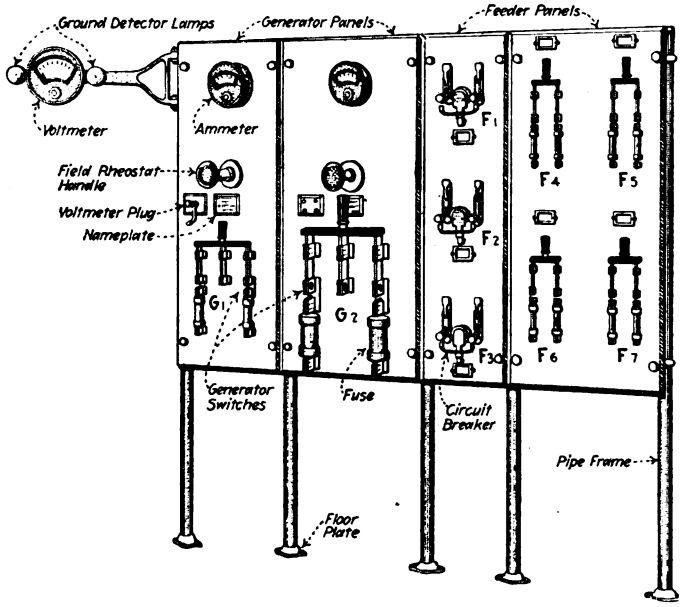

Fig. 1—Small "Standard-Unit" Switchboard for Two Compound-Wound Direct-Current Generators and Seven Feeders (General Electric Company).

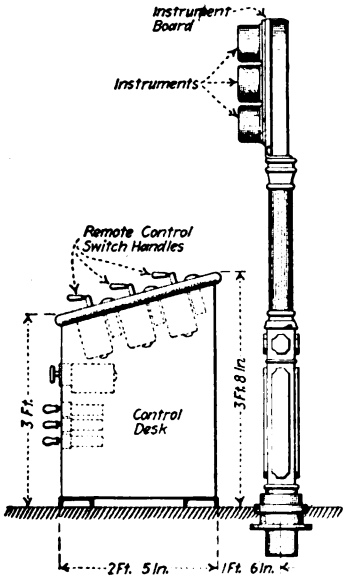

Fig. 2—End Elevation of the Control Desk and Instrument Board.

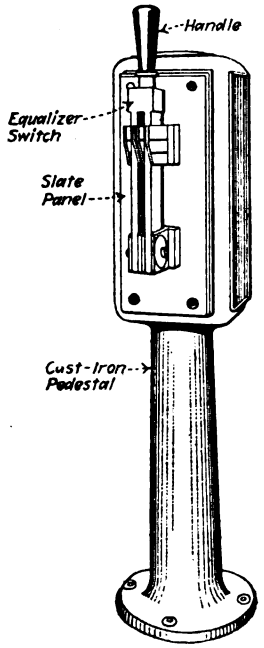

Fig. 3—Westinghouse Equalizer Pedestal with Switch for Compound-Wound Direct-Current Generator.

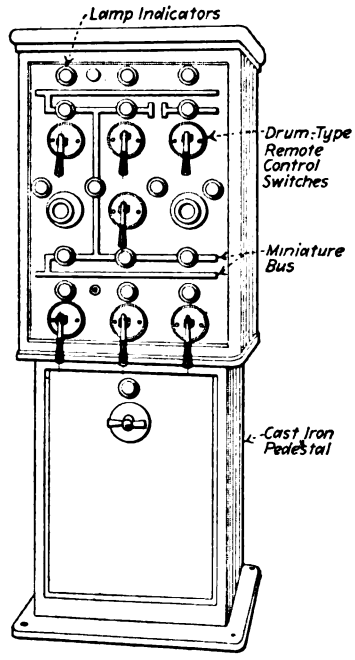

Fig. 4—Westinghouse Control Pedestal Used in Combination with an Instrument Post.

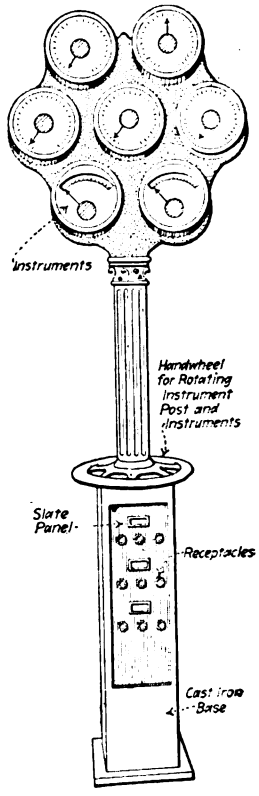

Fig. 5—Instrument Post Used Instead of a Panel Switchboard.

The function of a switchboard may be explained thus:—A switchboard is that component of a switchgear equipment on which are mounted the meters, switch control handles, rheostat handles and similar contrivances. For the control of small amounts of power at low voltages it is, as will be shown, most convenient and economical to mount all of the switchgear on the switchboard, in which case the board is then said to be *self-*

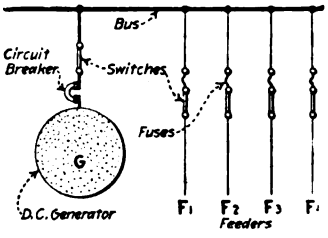

Fig. 6—Single-Line Diagram for the Direct-Current Switchboard.

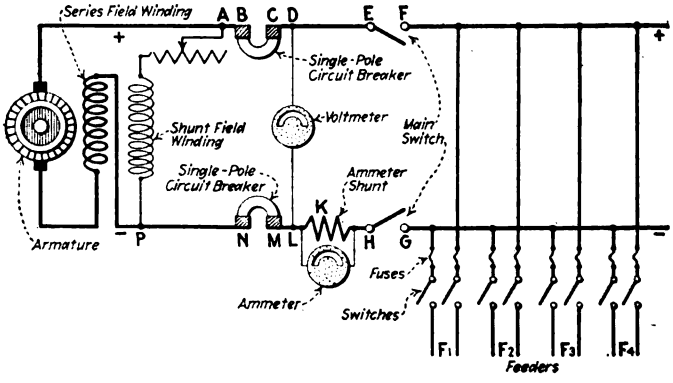

Fig. 7—Circuit Diagram for Switchboard Lay-Out for a Single Compound-Wound Generator.

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contained. Where the power output is large or at high voltage, it is necessary to install certain components of the switchgear at locations distant from the switchboard proper. That is, under these conditions "remote control" is utilized. A switchboard which involves remote control is called a *remote-control switchboard*. However, in general, the control is always effected from and by means of switches, meters and appliances on the switchboard.

Switchboards may be divided into four classes:—Panel switchboards (Fig. 1); control desk switchboards (Fig. 2); pedestal switchboards (Figs. 3 and 4), and post switchboards (Fig. 5).

A panel switchboard is one composed of panels of insulating material supported on a suitable iron frame-work. The various switches, instruments, rheostat handles and other control appliances are mounted on these vertical panels. Each panel is, for the larger switchboards, composed of *sections*. The panels are mounted side by side to constitute a complete switchboard.

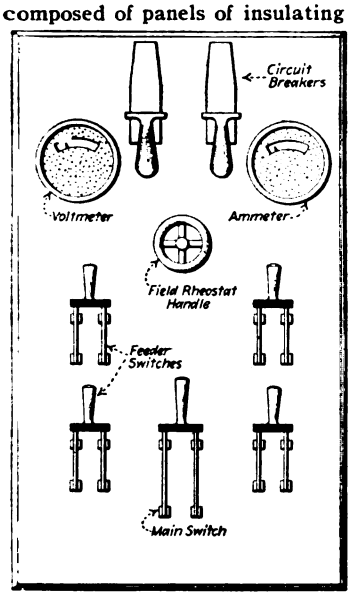

Fig. 8—Front View of Switchboard Panel for a Single Compound Wound Direct-Current Generator.

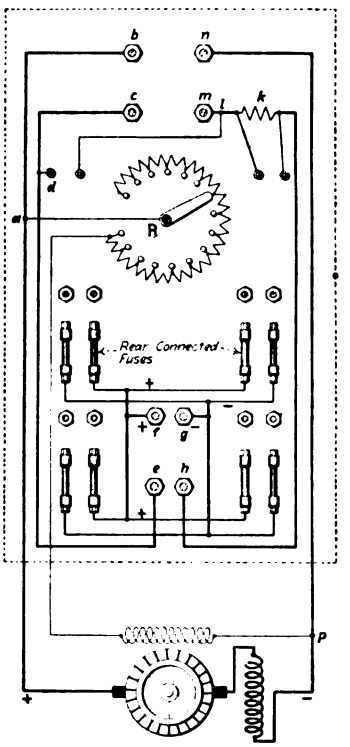

Fig. 9—Phantom View of the Switchboard Panel for the Compound-Wound Generator as it would appear if the panel were removed, exposing the Connections behind.

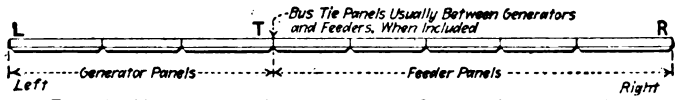

Fig. 10—Showing Usual Arrangement of Switchboard Panels.*
*General Electric Company.

The procedure in laying out a switchboard is indicated in an elementary way in Figs. 6, 7, 8 and 9. These show the control and measuring equipment for a small direct-current compound-wound generator which serves four feeder circuits. The first step is to make a simple "single line" diagram (Fig. 6) indicating what it is desired to accomplish with the switchboard. Such a diagram usually shows only the important elements such as switches, fuses, circuit breakers and the like and their general relation to one another. Then as a second step a circuit diagram (Fig. 7) which shows all of the devices which are to be incorporated can be made. Working from this basis the equipment can be arranged on the front of an insulating panel of suitable size (Fig. 8). Then, the arrangement of the apparatus and wiring on the back of the board can be worked out as suggested in Fig. 9. After the lay-out of the back of the board has been examined it may be necessary to alter the locations of certain equipment on the front. The front and rear lay-outs must be developed in conjunction. It is not practicable to develop one independently of the other. The lettering on Fig. 7 corresponds with that on Fig. 9.

In arranging the switchboard panels it is usually desirable to

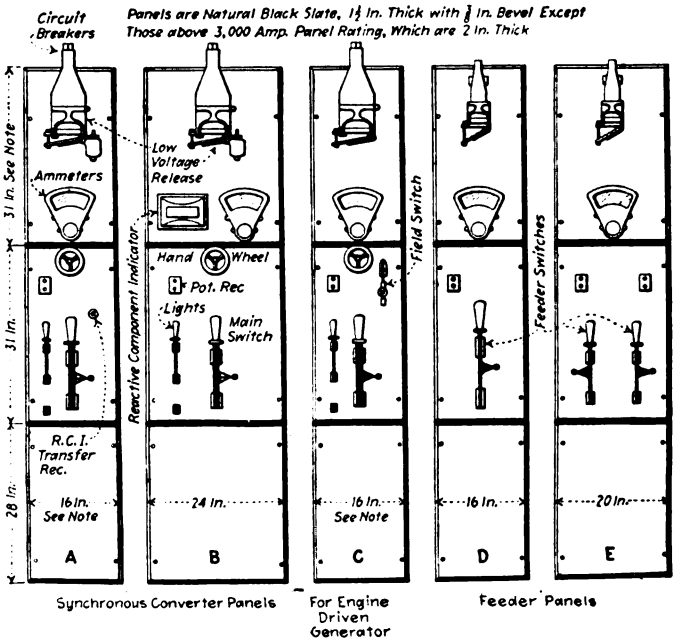
Circuit Breakers
Panels are Natural Black Slate, 1½ In. Thick with ¼ In. Bevel Except Those above 3,000 Amp. Panel Rating, Which are 2 In. Thick
31 In. See Note
31 In.
28 In.
Ammeters
Low Voltage Release
Reactive Component Indicator
Hand Wheel
P. F. Pot. Rec
Lights
Main Switch
Field Switch
Feeder Switches
R.C.I. Transfer Rec.
16 In. See Note
24 In.
16 In. See Note
16 In.
20 In.
A
B
C
D
E
Synchronous Converter Panels
For Engine Driven Generator
Feeder Panels
Note: Panels over 4000 Amp. have Top Sections 40 In. High and for Fig. A and C are 20 In. Wide. Generator and Converter Panels 4,000 Amp. and Less for Installation in the Same Board with Larger Panels will also be Furnished with 40 In. Top Sections.

Fig. 11—Unit Switchboard Panels for 600-Volt Direct-Current Railway Service.*
*General Electric Company.

locate the generator panels (Fig. 10) at the left and the feeder panels at the right, although it may be advisable to depart from this practice under certain conditions. Totalizing panels or tie-bus panels may be inserted between the generator and feeder panels as shown at *T*, Fig. 10.

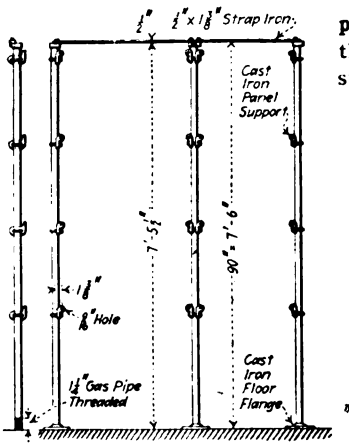

Fig. 12—Wrought-Iron Pipe Frame for Switchboard.*
*Westinghouse Elec. & Mfg. Co.

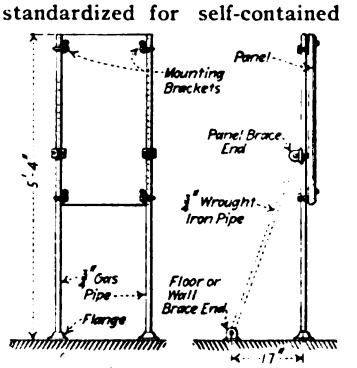

Fig. 13—Wrought-Iron Pipe Support for Small Panel.

The proportions of switchboard panels and sections have, in the United States, been fairly well standardized for self-contained switchboards. Panels for switchboards of medium or large capacity are almost universally made 90 in. high (Fig. 11). The "unit" sections of a 90-in.-high switchboard are, in accordance with the practice of one manufacturer, of the heights indicated in Fig. 11. Where only two sections constitute a panel, the lower slab may be 25 in. high and the upper slab 65 in. A different manufacturer uses a 62-in.-high upper slab and a 28-in.-high lower slab. The general practice is now, however, to always use three sections for 90-in.-high panels, in which case the section heights may be as shown in Fig. 11, or instead, the upper section may be 20 in. high, the middle section 45 in. and the lower 25 in. high.

NOTE.—It has been explained that the reason why these particular dimensions were adopted is that a 20-in.-high section at the top is of ample proportions to support the standard brush-type carbon circuit-breaker, which is often located at the top on the switchboard so that the arc which rises from it, when operated under load, can not do damage. The heights of sm

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single-section panel switchboards like that of Fig. 1 have not been thoroughly standardized. One company uses a height over-all of 5 ft. 4 in., where feasible, for boards of this general design.

The frames for panel switchboards are made either of wrought iron pipe or structural steel sections. The components of the pipe frames are shown in Figs. 12 and 13 for 90-in. and 64-in.-high boards respectively. The pipe frames appear to be becoming more popular. The general construction is apparent from the illustration. Standard angle iron frames are constructed as illustrated in Fig. 14. The angle iron frame provides a very rigid support for the switchboard panel. In every installation a substantial channel base, *C*, Fig. 14, should be provided to form a level and substantial footing on which the upright pipe or single members which support the panel can rest.

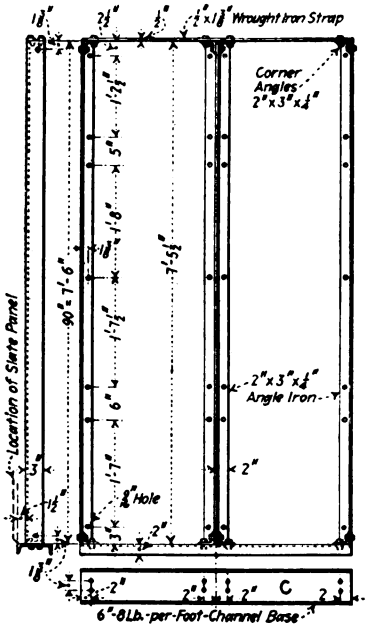

Fig. 14—Angle-Iron Frame for Switchboard.*

*Westinghouse Electric & Mfg. Co.

Fittings for supporting switchgear, sometimes called "switchgear details," can now be obtained in many different designs, someone of which will satisfy almost any condition. Figs. 15 and 16 show typical forms. The drawing of Fig. 16 details the fittings for an iron pipe brace which may be used for bracing a panel to the floor, as shown in Fig. 13, or for attaching it to a wall.

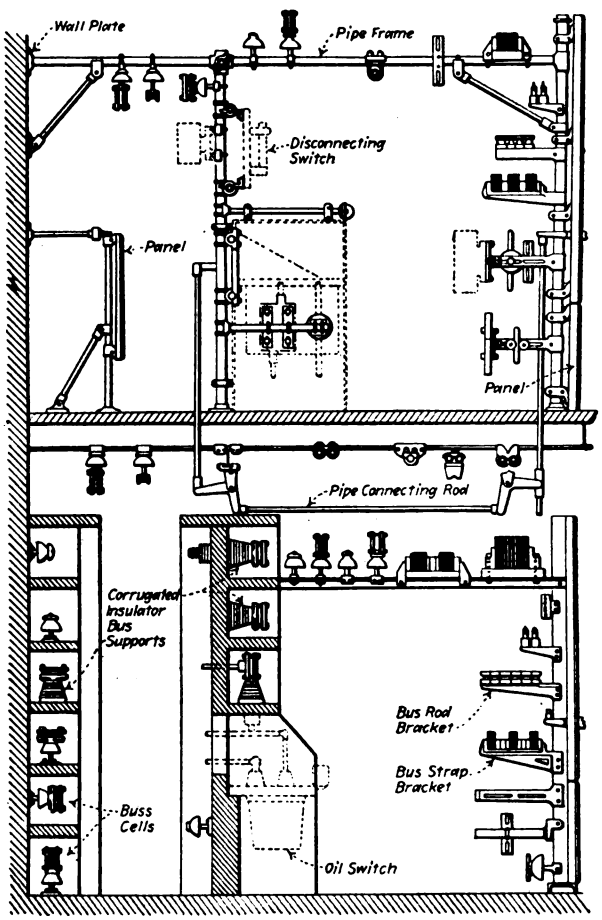

Fig. 15—Fittings and Appliances which are Regularly Manufactured for Switching Installations.*

*Electric Journal, May, 1913, p. 82.

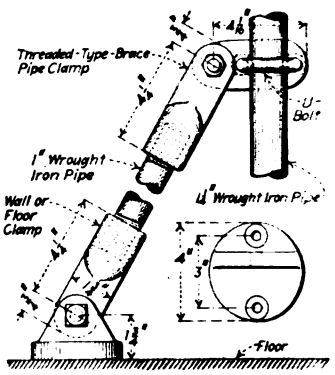

Fig. 16—Wall or Floor Brace.

The material for switchboard panel sections must be an insulator. Either slate or marble is now ordinarily used for this service. Slate costs less than marble and is stronger but is not as good an insulator, therefore, where the pressure for which insulation must be provided is more than 750 volts or less than 1100 volts the use of marble is imperative. However, modern switchboards (even those for the control of apparatus operating at the highest commercial voltages) do not have extending through them conducting members the difference of potential between which exceeds 110 volts. Even for 2400 and 6600-volt switchboards the oil switches, the instrument transformers and the other members upon which line voltage is impressed are thoroughly insulated from the switchboard sections.

Therefore, slate sections can, from an electrical standpoint, be used for practically any switchboard. The marble sections soil easily and are, under certain conditions, almost impossible to clean. The black-finished-slate panels will always look well if reasonable attention is given to them. There does not appear to be any justification for the use of marble as a switchboard section material except in display installations.

Panel switchboards are used more frequently than those of any of the other types because of their adaptability to the many different conditions. They may be utilized for the control of practically any direct or alternating-current installation. However, as will be explained, switchboards of the pedestal, post and control-desk types may be desirable or necessary for large or complicated installations. Self-contained panel switchboards may be used where the voltage does not exceed 6600. Remote-control panel switchboards can be used for equipment operating at higher voltages.

Post switchboards (Fig. 5) are practically always of the remote-control type. They may be used in large installations wherein they may be so located that they can be readily observed by the operator without obstructing his general view of the station interior.

Pedestal switchboards (Figs. 3 and 4) are sometimes called control pedestals. Those of the type suggested in Fig. 4 are used in conjunction with instrument posts for controlling generator or feeder circuits. One pedestal may be provided for each generating unit, which minimizes the possibility of the switchboard operator effecting misconnections. The pedestals are sufficiently low that they do not interfere with the operator observing the interior of the entire station. Equalizer pedestals (Fig. 3) are used for supporting the equalizer switches for compound-wound direct-current generators. Such a pedestal may be located near each large direct-current generator so that the cost of the relatively large cables to the switchboard proper, which would otherwise be necessary, is eliminated. The application of an equalizer pedestal is shown in a following illustration under the heading "600-Volt Railway Switchboards."

Control desk switchboards (Fig. 2) are always of the remote-control type and are ordinarily desirable only for large installations. The instruments are usually arranged on vertical panels. In the face of the control desk are arranged the remote-control switches and indicating lamps and on its face is frequently mounted a miniature bus structure whereby the operator can observe at any time the combination of interconnections then existing between the generating and converting equipment in the station and the lines or feeders radiating from it.

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CLASSIFICATION	No. on File	Age	Qualifications	Experience	Salary Wanted	Location
Advertising Managers	3	23–29	H. S.-College	2–8 yrs.	$150–250	Anywhere.
Bookkeepers	3	26–31	High School	5–14 yrs.	$65–100	Anywhere.
Central Station Engineers	5	29–45	H. S.-Univ.	6–18 yrs.	$60–200	Anywhere.
Clerical	7	22–47	High School	2–10 yrs.	$65–125	Anywhere.
Commercial Laboratory Workers	1	29	Tech. School	11 yrs.	.....	Anywhere.
Construction Engineers	8	21–39	H. S.-Univ.	4–20 yrs.	$50–200	Anywhere.
Consulting Engineers	2	27	Tech. Grad	8 yrs.	.....	Anywhere.
Draftsmen	2	25–31	Tech. School	5–18 yrs.	$80–150	Anywhere.
Electricians	4	20–35	H. S.-Univ.	3–12 yrs.	$60–100	Anywhere.
Electrical Engineers	17	22–45	Practical-Univ.	5–20 yrs.	$65–300	Anywhere.
Engineers	10	23–31	Practical-Univ.	5–12 yrs.	$120–160	Anywhere.
Estimators	2	34–35	Practical	9–18 yrs.	$125–160	Anywhere.
Fixture Men	2	26–28	Practical	10 yrs.	$140	Anywhere.
Foremen	4	27–31	Practical	7–14 yrs.	$125–160	Anywhere.
General Managers	5	30–34	Practical	7–15 yrs.	$250–417	Anywhere.
Illuminating Engineers	2	26–31	Univ	5–7 yrs.	$100–200	Anywhere.
Linemen	3	24–28	High School	4–9 yrs.	$90	Anywhere.
Maintenance Men	1	26	High School	6 yrs.	.....	Anywhere.
Managers, Commercial Department	1	43	Practical	12 yrs.	$200	Anywhere.
Managers, Contracting	1	26	College	5 yrs.	$125	Anywhere.
Managers, Jobbing House	2	32	College	13 yrs.	$2,400-10,000	Anywhere.
Managers, Office	3	26–32	High School	10 yrs.	$200	Anywhere.
Managers, Plant	21	25–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere.
Managers, Store	1	29	Univ.	10 yrs.	$125	West.
Managers, Railway	1	39	Practical	4 yrs.	$200	Anywhere.
Managers, Traffic	1	37	Practical	15 yrs.	$200	Anywhere.
Manufacturers Representatives	13	30–46	Practical-Tech.	9–20 yrs.	Com.–$300	Anywhere.
Mechanical Engineers	1	40	Univ.	.....	$200	St. Louis.
Meter Testers	2	28–34	Grade-College	8–16 yrs.	$100	Anywhere.
New Business Managers	4	29–34	H. S.-Univ.	9–15 yrs.	$100–200	Anywhere.
Office Executives	10	25–40	Grade-Univ.	4–18 yrs.	$80–200	Anywhere.
Power Salesmen	2	25–36	Tech. Grad.	5–12 yrs.	$90–200	Anywhere.
Purchasing Agent	10	24–41	Grade-Tech.	4–21 yrs.	$80–200	Anywhere.
Sales Engineers	9	25–41	College-Univ.	4–11 yrs.	$100–200	Anywhere.
Sales Managers	12	28–45	H. S.-Univ.	4–17 yrs.	$150–417	Anywhere.
Salesmen	74	22–55	H. S.-Univ.	2–25 yrs.	$75–200	Anywhere.
Store Keepers	1	33	Practical	10 yrs.	$150	Anywhere.
Superintendents	25	26–46	H. S.-Univ.	3–15 yrs.	$100–500	Anywhere.
Supervisors Lighting	1	25	Technical	7 yrs.	$100	East.
Telephone Engineers	2	24–28	H. S.-Tech.	5–7 yrs.	.....	Anywhere.
Testing Engineers	1	24	Technical	2 yrs.	$100	Anywhere.
Wiremen	2	23–30	High School	7–17 yrs.	$75–125	Anywhere.

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JOVIANS!

Can You Use Any of These Jobs?

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, are seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau. A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of any of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

121. Salesmen. Electric stove manufacturer has opening for several experienced men.

122. Electricians. Two all around men wanted by Indiana public service concern.

123. Electric Engineer. Detroit manufacturer has attractive opening for young man having technical training, especially in mathematics.

124. Fuse Salesman. Large Middle West manufacturer has place for two men, one each in East and West; Commission with drawing account.

125. Meter Man. Forty cents an hour for eight-hour day, with overtime, paid by Texas public service concern.

126. Wiremen. Ohio contractor is in need of several competent men.

127. Electrician. All round machine shop repair man wanted in Ohio.

128. Chandelier Salesman. Oklahoma fixture house will pay $25 per week for capable man.

129. Electrician. Combined house-wiring and line-work man wanted by Missouri public service concern.

130. Mechanical Superintendent. $175 per month opening with reclamation service in North Dakota for man competent to take charge of steam generating station, supplying power for nearby city, also for irrigation purposes. Married man preferred; five-room cottage available at $12 per month; school facilities; should be on ground by October 15; to take charge November 1.

131. Traveling Salesman. Experienced electrical man wanted to cover Alabama and Tennessee; good proposition for right man.

132. Salesmen. Brooklyn house has opening for several men familiar with flashlight and miniature battery lines.

133. Miscellaneous. Eastern telephone company is in need of draftsmen, linemen, wiremen, maintenance men and telephone engineers.

134. Salesman. Texas electric supply house will pay $90 per month for experienced man not subject to draft.

137. Armature Winder. New York firm will pay $24 for 48-hour week, with excellent chances for advancement. for men familiar with winding and repairs on A. C, and D. C. motors and dynamos.

138. Salesmen. Southern electric supply house will pay $85 per month for young men with some experience selling.

140. Electricians. Kansas City contracting concern is in need of several men.

141. Salesmen. Hustler wanted to sell electrical and auto supplies in Southern Illinois, Western Kentucky and Tennessee.

142. Salesmen. Chicago house can use several men to sell Brascolites on commission.

143. Salesmen. Good opening for man familiar with sale of appliances, window trimmings, to estimate wiring and fixture job.

146. Draftsman. Capable man wanted by large eastern electrical manufacturer.

147. Maintenance Man. Opening ready with Philadelphia electrical house.

148. Central Station Engineers. Salary and board offered by pleasure resort for man who is also a fair mechanic.

149. Clerical-Purchasing. Combination opening with Philadelphia electrical house.

150. Salesmen-Sales Engineers. Men with E. E. training and several years practical mechanical experience are needed by middle-west electrical manufacturer.

151. Salesmen. Public service concern is looking for men; central station experience desirable but not necessary.

152. Salesmen. Experienced men wanted by large jobbing concern.

153. Sales Office Assistant. An opening for energetic young man; chance for salesman opening later; electrical experience or education necessary.

154. Industrial Plant Machinery Salesman. Attractive proposition in Oklahoma for ambitious young man who has had some experience in this line.

159. Auditor—Accountant. Opportunity with a small combination railway and light property.

160. Salesmen. Three men, familiar with electrical supplies and machinery, needed by Philadelphia concern.

161. Sales Engineer. Chicago concern can use one or more capable men.

162. Salesmen. Pittsburgh house has opening for an "honest-to-goodness" order getter.

163. Bookkeeper. Ohio contracting house has a place for a fellow Jovian.

164. Salesmen. New England concern wants men for western Massachusetts, Maine and eastern Massachusetts territory; commission basis. Will consider only men capable of earning $75 to $100 per week.

165. Lighting Fixture Salesmen. Man capable of handling big business can find good opening with Omaha concern.

166. Salesmen—Tool Steel. New York tool steel manufacturer needs experienced men to cover Ohio, Pennsylvania, Texas and Florida.

167. Salesman. An eastern metal alloy house will open a branch in Detroit, and can use a high class man, familiar with electrical products.

168. Salesman. Chicago jobbing and wire house has opening for capable electrical salesman.

169. Operating Engineer. $110.00 and board to install refrigerating machinery.

170. Draftsman-Salesman. Chicago electrical supply house can use a combination man familiar with switch and panel boards.

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STATESMEN-AT-LARGE

ALEXANDER, H. W., Po. 17191, 29 West Thirty-Ninth St.....New York, N. Y.
BINFORD, JULIAN, Po. 1174V, care Westinghouse Lamp Co.....Altanta, Ga.
BISCHOFF, W. E., Po. 3190, care W. N. Matthews & Bro.....Chicago, Ill.
CHASE, SAMUEL A., Po. 4424, care Westinghouse Electric & Manufacturing Co.....East Pittsburgh, Pa.
COLKITT, J. N., Po. 2627, care John A. Roeblings Sons Co.....Los Angeles, Cal.
CROWFOOT, C. M., Po. 1182, care Crouse-Hinds Co.....Cincinnati, Ohio
CROW, GALEN, Po. 925V, care Public Service Co. of Oklahoma.....Guthrie, Okla.
DOWNS, B. M., Po. 2508, care Hemingray Glass Co.....Covington, Ky.
DUNHAM, A. W., Po. 7352, care Sun Ray Manufacturing Co.....Oshkosh, Wis.
FOSTER, F. C., Po. 3398, 823 Illuminating Building.....Cleveland, Ohio
GUARDIA, A. A., Po. 2657, 4447 Magnolia Ave.....Chicago, Ill.
HERSTEIN, W. R., Po. 765V, care Electric Supply Co.....Memphis, Tenn.
HILL, G. W., Po. 1271, 29 West Thirty-Ninth St.....New York, N. Y.
HICKOX, NORMAN B., Po. 7881, care National X-Ray Reflector Co., 235 West Jackson Blvd.....Chicago, Ill.
JOHNSON, FRED, Po. 177V, 1110 Federal Reserve Building.....St. Louis, Mo.
LAUDERBACH, F. E., Po. 11655, 917 Pine St.....St. Louis, Mo.
MONTGOMERY, R., Po. 6147, care Louisville Gas & Electric Co.....Louisville, Ky.
RAMIER, J. F., Po. 10604, care Memphis Cons. Gas & Electric Co..Memphis, Tenn.
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville, Ky.
RIPLEY, L. O., Po. 7042V, care Kansas Gas & Electric Co.....Wichita, Kan.
SERVA, A. A., Po. 425, 2420 Hoagland Ave.....Ft. Wayne, Ind.
VIOT, H. F., Po. 2156, 1810 Farnam St.....Omaha, Neb.
VOGAN, W. G., Po. 15974, care Northern Electric Co.....Winnipeg, Man.
VOGEL, J. C., Po. 2254-32V, Fifty-Ninth and Woodland Ave.....Philadelphia, Pa.
WADDINGTON, E. H., Po. 5176, care Western Electric Co.....St. Louis, Mo.
WAKEMAN, J. M., Po. 524, 29 West Thirth-Ninth St.....New York, N. Y.

JOVIAN STATESMEN

ALABAMA
MATTHEWS, H. W., Po. 4476, care Burgoon-Matthews Electric Co.....Birmingham
ARIZONA, CALIFORNIA, NEVADA
SPERRY, LEWIS E., Po. 9415, care New York Insulated Wire Co.....San Francisco
ARKANSAS
GRIFFITH, C. J., Po. 13901, care Little Rock Railway & Electric Co...Little Rock
CONNECTICUT
HOLMES, T. L., Po. 3046, care Western Electric Co.....West Haven
GEORGIA
COLLIER, RAWSON, Po. 4458, care Georgia Railway & Power Co.....Atlanta
IDAHO
KIERSTED, EARNEST C., Po. 10258, care Idaho Power Co.....Twin Falls
ILLINOIS
SPAKE, L. C., Po. 15397V, care Western Editor McGraw-Hill Publishing Co..Chicago
INDIANA
LEE, WALLACE O., Po. 11440, care Indianapolis Light, Heat & Power Co. Indianapolis
IOWA
GARNER, H. W., Po. 19507, care Des Moines Electric Co.....Des Moines
KENTUCKY
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville
LOUISIANA
PORTEOUS, W. A., Po. 9226, care Western Union Telegraph Co.....New Orleans
MARYLAND
LIVINGSTON, J. G., Po. 1721, care Southern Electric Co.....Baltimore
MASSACHUSETTS
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston
MICHIGAN
CAVANAUGH, J. A., Po. 11199, care Benton Harbor & St. Joe Ry. Co..Benton Harbor
MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA
VILETT, W. H., Po. 3675V, care Sterling Electric Co.....Minneapolis
MISSOURI
JOHNSON, FRED, Po. 177V, care Wagner Electric Manufacturing Co...St. Louis
NEBRASKA
ZIMMAN, I. B., Po. 1411, care Omaha Electric Light & Power Co.....Omaha
NEW HAMPSHIRE
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston Mass.
NEW JERSEY, DELAWARE
HOWLETT, C. A. S., Po. 279.....Elizabeth
NEW MEXICO
SHEPARD, J. A., Po. 16106, care Deming Ice & Electric Co.....Deming
NEW YORK
HINES, E. G., Po. 16222, care Electrical World, 239 West Thirty-Ninth St.New York
OHIO
BOYNTON, N. H., Po. 5604V.....Cleveland
OKLAHOMA
MCCALLUM, CHARLES, Po. 3394, care Western Electric Co.....Oklahoma City
OREGON
MOODY, A. S., Po. 4576, care Pacific States Electric Co.....Portland
PENNSYLVANIA
CRISS, GEO. H., Po. 3364.....Pittsburgh
RHODE ISLAND
DAVENPORT, E. R., Po. 8019, care Naragansett Electric Light Co.....Providence
SOUTH CAROLINA
FULLER, W. W., Po. 16462, care Isle of Palms Traction Co.....Charleston
TENNESSEE
WATSON, C. J. R., Po. 2131V, care Electric Supply Co.....Memphis
TEXAS
CLARK, HIRAM O., Po. 6629, care Houston Lighting & Power Co.....Houston
UTAH
TALMADGE, CHARLES H., Po. 1431, care Western Electric Co.....Salt Lake City
VERMONT
LARRABEE, E. E., Po. 1145, care Twin States Gas & Electric Co.....Bennington
VIRGINIA
SEILER, GUY E., Po. 7479, care Virginia Railway & Power Co.....Richmond
WEST VIRGINIA
POWERS, W. R., Po. 2784, care Consolidated Heat, Light & Power Co...Huntington
WISCONSIN
GOLIN, CARL, Po. 12385V, care Northwestern Storage Battery Co.....Milwaukee
PROVINCE OF ALBERTA
RICHARDS, NORMAN S., Po. 8985, care Northern Electric Co.....Calgary
PROVINCE OF MANITOBA
SCHUMACHER, J. H., Po. 1742, care Schumacher-Gray Co., Ltd.....Winnipeg
PROVINCE OF QUEBEC
HYDE, E. N., Po. 1614, care Northern Electric & Manufacturing Co...Montreal

FIRST AND SECOND TRIBUNES

ALABAMA
MATTHEWS, H. W., Po. 4476, First Tribune, care Burgoon-Matthews Electric Co.....Birmingham
ARKANSAS
RUSH, J. C., Po. 1556V, First Tribune, care Rush Bros.....Hot Springs
CALIFORNIA
BROCKWAY, A. E., Po. 6039, First Tribune, care Latourrette Fiscal Co., 3431 Sacramento Ave.....Sacramento
(J. O. Tobey, Po. 12226, Second Tribune)
*FAGG, J. H., Po. 12212, First Tribune, care Pacific Gas & Electric Co....Stockton
(*A. F. Flanagan, Po. 12213, Second Tribune.)
FISHER, R. E., Po. 7389, First Tribune, care Pacific Gas & Electric Co.San Francisco
(W. L. Neelands, Po. 9395, Second Tribune)
GOULD, T. A., Po. 18057, First Tribune, care Redondo Home Telephone Co.....Redondo Beach
KLAUBER, L. M., Po. 14635, First Tribune, care San Diego Consolidated Gas & Electric Co.....San Diego
(R. C. Cavell, Po. 14627, Second Tribune)
SESSIONS, H. N., Po. 14256, First Tribune, care Southern California Edison Co., 120 East Fourth St.....Los Angeles
(K. E. Van Kuran, Po. 7062, Second Tribune)
(Henry Mellman, Po. 9392, Second Tribune).....Oakland
COLORADO
PAUL, CLARENCE M., Po. 4942, First Tribune, care Trinidad Gas & Electric Supply Co.....Trinidad
(Harry L. Woolfenden, Po. 1062V, Second Tribune)
DELAWARE
*SHELDON, H. E., Po. 14400, First Tribune, care Wilmington & Philadelphia Traction Co.....Wilmington
DISTRICT OF COLUMBIA
CARROLL, HARRY R., Po. 1794, First Tribune, 514 Twelfth St., N. W...Washington
GEORGIA
*FLANIGAN, C. D., Po. 4708, First Tribune, care Athens Railway & Electric Co.....Athens
(Geo. E. Watts, Po. 12482, Second Tribune).....Atlanta
IDAHO
BROWN, O. P., Co. 17281, First Tribune, care Mountain States Tel. & Tel. Co.....Idaho Falls
DOVERY, C. G., Po. 10241, First Tribune, care Idaho Powor Co.....Twin Falls
(J. O. Blackstone, Po. 15318, Second Tribune)
ILLINOIS
BAUM, B. E., Po. 19260, First Tribune, care Vermillion County Telephone Co.....Danville
BROWN, EDWIN C., Po. 5278, First Tribune, care Galva Electric Light Co...Galva
(Chas. E. Broderick, Po. 1154, Second Tribune).....East St. Louis
GREEN, WM. A., Po. 13279, care Green Electric Co., 315 South Jefferson St...Peoria
(Jas. R. Downs, Po. 13277, Second Tribune)
KETTRON, C. W., Po. 16416, First Tribune, President, Illinois Elect. Porc. Co.....Macomb
(James R. Massey, Po. 8939, Second Tribune).....Springfield
MORSE, CHESTER A., Po. 14611, First Tribune, care Central Public Illinois Service Co.....Mattoon
(Donald R. Truax, Po. 14617, Second Tribune)
ILLINOIS—Continued
*NELSON, A. L., Po. 15384, First Tribune, care Commonwealth Edison Co..Chicago
(*W. H. Coleman, Po. 3040V, Second Tribune.)
INDIANA
HARRIS, A. B., Po. 14154, First Tribune, 570 Washington St.....Gary
LEE, WALLACE O., Po. 11440, First Tribune, Indianapolis Light, Heat & Power Co.....Indianapolis
KLINE, J. J., Po. 6165, First Tribune, care Fort Wayne Works, General Electric Co.....Fort Wayne
(Jas. I. Toy, Po. 14768, Second Tribune)
*SOUTH, M. E., Po. 16419, First Tribune, care Globe Stove & Range Co...Kokomo
IOWA
*ABELL, C. S., Po. 3952V, First Tribune, 419 Main St.....Keokuk
FLACK, FRANK W., Po. 13979, First Tribune, care Iowa Ry. & Light Co..Coon Rapids
LOVEGROVE, N. W., Po. 5638, First Tribune, care Herring Motor Co..Des Moines
MCINNERNEY, B., Po. 1400, First Tribune, care Kimball Bros. & Co..Council Bluffs
(E. S. Damon, Po. 1398, Second Tribune)
MURPHY, J. E., Po. 15800, First Tribune, care Murphy-Dunham Co..Sioux City
KANSAS
CAMP, ROBERT N., Po. 16505, First Tribune, 108½ East Ash St.....Salina
CATES, WILLIAM C., Po. 17862, First Tribune, care Cates Electric Co...Hutchinson
HARVEY, J. L., Po. 6546, First Tribune, care General Electric Co., 945 Emporia St.....Wichita
(Charles A. Stanley, Po. 9690, Second Tribune)
HUBBARD, HARVEY B., Po. 17623, First Tribune, care Hubbard Electric Co..Beloit
*MAGRUDER, H. W., Po. 15816, First Tribune, care Liberal Light, Ice & Power Co.....Liberal
MURPHY, JAS. R., Po. 15817, First Tribune, care Great Bend Water & Electric Light Co.....Great Bend
KENTUCKY
ADAMS, F. C., Po. 18315, First Tribune, proprietor, Adams Electric Co...Sulphur
BERRY, D. EARLE, Po. 8245, First Tribune, care Ruby House.....Owensboro
(C. C. Childers, Po. 15494, Second Tribune).....Louisville
LOUISIANA
AICKLEN, WM. J., JR., Po. 5666, First Tribune, care Consumers Electric Light & Power Co.....New Orleans
(W. A. Porteous, Po. 9226, Second Tribune)
JOUBERT, W. C., Po. 16467, First Tribune, 409 Main St.....Baton Rouge
MCCONNELL, JOHN J., Po. 17031, First Tribune, care Rayville Light Plant..Rayville
*SWANN, L. A., Po. 2730-100, First Tribune, care Lake Charles Railway & Light Company.....Lake Charles
(*J. A. Landry, Po. 127, Second Tribune.)
WILLIAMS, J. A., Po. 5053, First Tribune, care Southwest Gas & Electric Co.....Shreveport
(H. E. Cahn, Po. 13025, Second Tribune)
MARYLAND
(Stanley B. Prather, Po. 1650, Second Tribune).....Baltimore
MASSACHUSETTS
LAVIN, LEO J., Po. 15143, First Tribune, 95 Pleasant St.....Worcester
(Kurt R. Sternberg, Po. 7612, Second Tribune).....Springfield

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AVIS, CLYDE J., Po. 10086, First Tribune, Treasurer, Southern Michigan Light & Power Co ..... Morenci
COURVILLE, H. W., Po. 13954, First Tribune, care Commonwealth Power Co..Jackson
*CUDAHY, J. D., Po. 16321, First Tribune, care Consumers Power Co.... Kalamazoo
(*L. W. Brown, Po. 16319, Second Tribune.)
(Guy G. Crane, Po. 13059, Second Tribune) ..... Lansing
CURTIS, ROBT. E, Po. 19050, First Tribune, care Benton Harbor & St. Joe Railway & Light Co ..... Benton Harbor
DUQUETTE, EDWARD, Po. 14965, First Tribune, 69 Mason Ave ..... Muskegon
KIMBLE, RICHARD L., Po. 283, First Tribune, care Electric Supply Co... Saginaw
(Geo. A. Trombley, Po. 14750, Second Tribune)
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St ..... Traverse City
MCCLOY, A. S., Po. 11051, First Tribune, care Stevenson Hotel ..... Detroit
(J. T. Pearson, Po. 11210, Second Tribune)
RAYNES, J. FRANK, Po. 13965, First Tribune, care Michigan Carton Co., 61 West St ..... Battle Creek
(Edw. G. Austin, Po. 15151, Second Tribune)
SCHAGANE, P. F., Po. 13871, First Tribune, 617 South Saginaw St ..... Flint
(L. G. Copeman, Po. 7219, Second Tribune)
*THORNE, JOHN J., Po. 14749, First Tribune, care Throne Electric Co ..... Bay City
(*Samuel Ball, Po. 19542, Second Tribune.)
WATSON, GEO. H., Po. 12848, First Tribune, care Consumers Power Co., 124 Monroe St ..... Grand Rapids
(R. H. Vandermass, Po. 16484, Second Tribune)

MINNESOTA

*ANDERSON, EMIL, Po. 7805, First Tribune, 239 Plymouth Building.... Minneapolis
(*Paul Joyslin, Po. 1254, Second Tribune.)
FULLER, FLOID M., Po. 8189, First Tribune, 813 Torrey Building..... Duluth

MISSISSIPPI

GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co ..... Gulfport
*MCANGE, W. N., Po. 16854, First Tribune, care Southern Telephone & Telegraph Co., Telephone Building ..... Corinth
NEWBILL, HOMER J., Po. 16855, First Tribune, Box 413 ..... Tupelo
WILSON, J. B., Po. 18198, First Tribune, care Meridian Light & Railway Co..Meridian
(H. E. Brandli, Po. 15617, Second Tribune)

MISSOURI

BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co ..... Marshall
BOWLES, JOHN D., Po. 17658, care Springfield Gas & Electric Co..... Springfield
(G. E. Michel, Po. 9061, Second Tribune) ..... St. Louis
FOX, CHAS. D., Po. 18163V, First Tribune, care City Light Plant..... St. Joseph
(S. W. Beale, Po. 6840, Second Tribune)
*FUNSTEN, F. L., Po. 3043, First Tribune, 1113 Wyandotte St..... Kansas City
(*A. D. Barber, Po. 1850, Second Tribune.)
(A. M. Grall, Po. 4112, Second Tribune) ..... Joplin
*NIENHAUS, J. V., Po. 19219, First Tribune, care Perry County Public Utilities Co ..... Perryville

NEBRASKA

BURLEY, W. B., Po. 10291, First Tribune, 318½ West Koenig St..... Grand Island
(J. D. Whitmore, Po. 1409, Second Tribune)

NEW JERSEY

ALEXANDER, JOHN P., Po. 11892, First Tribune, Broad St. Bank Bldg.... Trenton
COLLISON, GEORGE L., Po. 17040, First Tribune (for Passaic County), 188 Ellison St ..... Paterson
COX, W. A., Po. 18960, First Tribune, care Public Service Electric Co... Newark
(J. N. Adam, Po. 18975, Second Tribune)
FEY, W. E., Po. 10120, First Tribune, care Diehl Manufacturing Co. Elizabeth
STERLING, HARRY CAULFIELD, Po. 11014, First Tribune, care Atlantic City Electric Co ..... Atlantic City
STORTZ, H. W., Po. 16450, First Tribune, care Edison Storage Battery Co..Orange
(J. B. Renwick, Po. 16445, Second Tribune)

NEW MEXICO

ROBERTS, E. A., Po. 17980, First Tribune, care Public Utilities Co..... Carlsbad
SMITH, JAMES R., Po. 16107, First Tribune, care Raton Electric Light & Power Co ..... Raton
SOUTHARD, W. P., Po. 16108, First Tribune, care Albuquerque Gas, Electric Light & Power Co ..... Albuquerque

NEW YORK

(C. C. MacKenzie, Po. 2029, Second Tribune) ..... Syracuse
BURNS, JOHN H., Po. 870, First Tribune, care McCarthy Bros. & Ford, 41 Eagle St ..... Buffalo
(L. F. Philo, Po. 774, Second Tribune)
HINES, E. G., Po. 16222, First Tribune, 239 West Thirty-Ninth St..New York City
(J. Lloyd Prince, Po. 4263, Second Tribune
RUSSELL, R. E., Po. 5561, First Tribune, care General Electric Co.... Schenectady

NORTH CAROLINA

JONES, WM. T., Po. 5685, First Tribune, P. O. Box 405 ..... Fayetteville
PICKARD, B. F., Po. 17250, First Tribune, care North Carolina Public Service Co ..... Greensboro
(James L. Griffin, Po. 5683, Second Tribune)
SPEAKE, CHAS. L., Po. 16993, First Tribune, care Westinghouse Electric & Manufacturing Co ..... Charlotte

OHIO

BRAUN, W. A., Po. 14652, First Tribune, care Braun Electric Manufacturing Co ..... Dover
(W. P. Holcombe, Po. 901V, Second Tribune)
CRAIN, CHARLES E., Po. 6946, First Tribune, care Crain-Stuart Co..... Springfield
(Fred J. Green, Po. 6951, Second Tribune)
EFFINGER, V. H., Po. 15900, First Tribune, Pres., V. H. Effinger Electric Co..Lima
EICHHORN, HARRY E., Po. 7099, First Tribune, care Municipal Electric Plant ..... Columbus
HALL, CHAS. S., Po. 12345, First Tribune, care Wm. Hall Electric Co., 916 Oliver St ..... Dayton
(F. B. Steele, Po. 13451, Second Tribune)
HANSEN, M. W., Po. 6121, First Tribune, 36 Eleventh St ..... Toledo
(Homer J. Kunz, Po. 15892, Second Tribune.)
HENCH, L. W., Po. 7854, First Tribune, care Westinghouse Electric & Manufacturing Co ..... Youngstown
(E. A. Sanders, Po. 9666, Second Tribune)
HURD, WILLIAM P., Po. 9798, First Tribune, care Northwestern Ohio Light Company ..... Van Wert
*LEMEN, L. J., Po. 13195, First Tribune, care Massillon Electric & Gas Co..Massillon
(*Samuel E. Ringgold, Po. 10995, Second Tribune.)
LOEWE, P. M., Po. 3942, First Tribune, care Oberlin Gas & Electric Co..Oberlin
MILLER, E. G., Po. 13108, First Tribune, care Warren & Niles Telephone Co..Warren
(Marshall, W. J., Po. 10001, Second Tribune.)

OHIO—Continued

MOYER, HAROLD, L., Po. 14386, First Tribune, 43 South New York St.... Kenmore
PARKER, HERBERT L., Po. 905, First Tribune, care Conneaut Metal Works Co ..... Conneaut
*ROHRBAUGH, C. L., Po. 18450, First Tribune, 1211 Carr St ..... Sandusky
(*R. C. Beebe, Po. 18442, Second Tribune.)
SALBER, W. E., Po. 14397, First Tribune, 408 Spicer St ..... Akron
(J. D. Witner, Po. 14412, Second Tribune)
SIMS, E. A., Po. 5968V, First Tribune, care Avery-Loeb Electric Co..... Newark
(F. C. Morrison, Po. 18630, Second Tribune)
SMITH, E. B., Po. 10596, First Tribune, care Coshocton Gas Co ..... Coshocton
*SNYDER, ED., Po. 19753, First Tribune, care Ohio Brass Company..... Mansfield
(*H. S. Robeson, Po. 13200, Second Tribune).
*VAN WINKLE, FRANK D., Po. 12966, First Tribune, care Post Glover Co..Cincinnati
(*L. E. Trotter, Po. 3510, Second Tribune.)
(Paul B. Zimmerman, Po. 7305V, Second Tribune) ..... Cleveland

OKLAHOMA

*CORKENS, O. K., Po. 19827, First Tribune, 213 W. First St..... Oklahoma City
(*A. L. Mullengren, Po. 18853, Second Tribune.)
HOWELL, EDWARD, Po. 7896, First Tribune, care Abernathy & Howell, Elks Building ..... Shawnee
*RENTCHLER, C. E., Po. 6870, First Tribune, care Enid Electric & Gas Company. Enid
(*Lincoln Beerbower, Po. 1475, Second Tribune.)
*WALKER, P. G., Po. 6871, First Tribune, care Tulsa Corporation ..... Tulsa
(James M. Kinslow, Po. 16770, Second Tribune.)
WHITE, L. A., Po. 14275, First Tribune, care Muskogee Gas & Electric Co..Muskogee

PENNSYLVANIA

HALLSTROM, A. L., Po. 1611, First Tribune, care Western Electric Co., Eleventh and York Sts ..... Philadelphia
(Frank P. Groves, Po. 3350, Second Tribune)
*FADER, W. L., Po. 2883, First Tribune, care Union Electric Co..... Pittsburgh
(*D. Paul Lockard, Po. 5788, Second Tribune.)
FARR, J. S., Po. 14876, First Tribune, 309 Sheredon Ave ..... New Castle
(H. N. Wood, Po. 16316, Second Tribune)
FERREE, L. L., Po. 18865, First Tribune, 1830 Regina St ..... Harrisburg
(T. F. R. Peyton, Po. 12438, Second Tribune.) ..... Erie
KRISE, W. M., Po. 4823, First Tribune, Manager, Jefferson Electric Co Punxsutawney
LODGE, JOS., Po. 18869, First Tribune, 157 East Chestnut St ..... Lancaster
MURPHY, WALTER R., Po. 14021, First Tribune, care Meadville Telephone Co ..... Meadville
(Carl W. Wilks, Po. 10848, Second Tribune)
(W. T. Snyder, Po. 5128, Second Tribune) ..... McKeesport
REGER, THOMAS E., Po. 4637, First Tribune, 224 Seventh Ave ..... Altoona

SOUTH CAROLINA

DOUGLAS, JAS. A., Po. 16984, First Tribune, care Municipal Electric Plant Lake City
(T. A. Brookbanks, Po. 16460, Second Tribune) ..... Charleston

TENNESSEE

ALLEN, TERRY E., Po., 18838, First Tribune, P. O. Box 185 ..... Jackson
COCHRAN, C. P., Po. 15212, First Tribune, City Hall ..... Nashville
(Grayson Jones, Po. 13782, Second Tribune)
RUTLEDGE, C. B., Po 2127, First Tribune, care Bluff City Electric Co... Memphis
(B. F. Myers, Po. 12911, Second Tribune)

TEXAS

IRVINE, R. J., Po. 6251, First Tribune, care San Angelo Water Light & Power Co ..... San Angelo
COPLEY, E. F., Po. 7073, First Tribune, care Central Electric Co..... Waco
(L. B. Gardner, Po. 11390, Second Tribune)
HARRIS, A. L., Po. 10643, First Tribune, care Brush Electric Co..... Galveston
(Max Levy, Po. 10652, Second Tribune)
LARABEE, R. W., Po. 1327, First Tribune, care Southwestern Electric & Machine Co ..... El Paso
MONTGOMERY, JOHN G., Po. 11355, First Tribune ..... La Marque
MUNROE, WALTER N., Po. 3085, First Tribune, care Texas Power & Light Co ..... Paris
NEWNING, H. M., Po. 16304V, First Tribune, 1118 Calhoun St..... Houston
PATRICK, S. V., Po. 1933, First Tribune, 2805 Monterey St ..... San Antonio
(C. E. Converse, Po. 8558, Second Tribune).
REID, BRUCE, Po. 18290, First Tribune, care Gulf Refining Co..... Port Arthur
(Edward T. Keck, Po. 18284, Second Tribune)

SMITH, GEO. B., Po. 6649, First Tribune, 309 Guadalupe St ..... San Marcos — Central Texas League: Lockhart, Luling, Seguin, New Braunfels, San Marcos

WAKEFIELD, R. S., Po. 2660, First Tribune, 1312 Busch Building..... Dallas
WHITE, FRANK A., Po. 2216, First Tribune, care West Texas Electric Co..Sweetwater
WRIGHT, J. A., Po. 2242, First Tribune, care Nunn Electric Co..... Amarillo

UTAH

ACHERMAN, R., Po. 2909, First Tribune, 209 Kearns Building..... Salt Lake City
WOLF, H. M., Po. 12774, First Tribune, Preisdent, Cache Valley Electric Co..Logan

VIRGINIA

BRINKLEY, R. J., Po. 14497V, First Tribune, care Virginia Railway & Power Co ..... Suffolk
EVANS, W. T., Po. 14939, First Tribune ..... Hopewell
GOODLOE, H. B., Po. 11169, First Tribune, 116 First National Bank Bldg. Roanoke
MARCHMONT, G. T., Po. 14497, First Tribune, care Western Electric Co..Richmond
WOODHOUSE, H. C., Po. 6618, First Tribune, 54 Bank St ..... Norfolk

WASHINGTON

HAROLD, W. H , Po. 840, First Tribune, Box 455 ..... Walla Walla
(H. B. Pierce, Po. 7235, Second Tribune) ..... Spokane

WEST VIRGINIA

COSTINE, THOS. E., Po. 7699, First Tribune, 1059 McColloch St ..... Wheeling
(R. R. Fagin, Po. 9161, Second Tribune)
HADDOX, H. A., Po. 9164, First Tribune, 843 Fourth Ave ..... Huntington
(F. G. Flickinger, Po. 9162, Second Tribune.)

WISCONSIN

DEARTH, E. C., Po. 17144V, First Tribune, care Wisconsin & Minnesota Light & Power Co ..... Eau Claire
(Holmes Ives, Po. 18253, Second Tribune)
*DUNHAM, A. W., Po. 7352, First Tribune, care Sun Ray Manufacturing Co..Oshkosh
ENGSBERG, B. C., Po. 15985, First Tribune, care Light and Water Dept..Lake Mills
*PFEIFER, JOSEPH W., Po. 10981, First Tribune, care Henry Newgard & Company ..... Milwaukee
(*W. R. Patton, Po. 1030, Second Tribune.)
LINKER, P. R., Po. 14302, First Tribune, care Wisconsin-Minnesota Light & Power Co ..... La Crosse
(Dan. Whalen, Po. 16022, Second Tribune)
TESSIER, LEONARD, L., Po. 18823, care De Pere Electric Light & Power Co..De Pere
ROBERTS, ELMER D., Po. 10997, First Tribune, 308 Sixth St ..... Racine
SCHEURMANN, A. R., Po. 17853, First Tribune, 8 Main St ..... Watertown

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CANADA

ALBERTA

(David Conn, Po. 11885, Second Tribune).....Lethbridge

MANITOBA

BAKER, L. R., Po. 12849, First Tribune, Oakview Ave., East Kildonan, Man.....Winnipeg
(C. J. Brown, Po. 5977, Second Tribune.)

ONTARIO

(C. B. Deeks, Po. 17101, Second Tribune).....Coniston
COOKE, W. P., Po. 16714, First Tribune, P. O. Box 178.....Port Arthur

SASKATCHEWAN

SANGSTER, A. G., Po. 7496, First Tribune, 820 Fourteenth St., East...Saskatoon

SPAIN

EDDY, H. W., Po. 11105, First Tribune, care Riegos y Fuerza del Ebro S. A. Apartado 491.....Barcelona

* * * *

JOVIAN HOTELS

HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their **current membership cards** at the time of settlement. **Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage.** Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

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Seattle, Wash.—SEATTLE	$1.00	$2.00
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Shreveport, La.—YOUREE	.....	.....
Sioux City, Ia.—MARTIN	$1.00	$2.00
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Tacoma, Wash.—OLYMPUS	.....	.....
Three Rivers, Mich.—THREE RIVERS	$2.00	.....
Tucson, Ariz.—HEIDEL	.....	.....
Vicksburg, Miss.—CARROLL	$1.00	.....
Waco, Tex.—NEW STATE	$1.00	$2.00
Watertown, S. D.—KAMPESKA	$1.00	.....
Winnipeg, Man.—ST. REGIS	$1.50	.....
Winnipeg, Man.—WELLINGTON	$1.00	$1.50
Winona, Minn.—WINONA	.....	.....

TECHNICAL STUDENTS DRAFTED MAY USE SCHOOL CREDENTIALS

DOCTOR Hollis Godfrey, chairman of the advisory committee on engineering and education of the Council of National Defense, has, under authority from the Secretary of War, sent the following telegram to the presidents of 129 engineering and technical schools throughout the United States:

> I have just been authorized by the Secretary of War to request you to inform all your technical students that if they wait until called under the selective-service law they can upon summons to the cantonment take with them letters from you stating their special qualifications. Such letters are to be filed with the occupational census questionnaire of the War Department under authority of this authorized telegram. The Secretary of War also authorized me to say that every effort will be made to use each student's special training in connection with specialized occupations in the Army, so as to afford technical students of National Army age as great an opportunity through the National Army as if they enlisted now.
>
> —The Official Bulletin.

* * * *

INTERNATIONAL LEAGUE OF FRATERNITIES

ESTABLISHED TO PROMOTE INTERNATIONAL ARBITRATION IDEALS AMONG SECRET SOCIETIES OF THE WORLD.

ACCREDITED representatives of several great fraternal orders met in New York a few days ago and organized The International League of Fraternities, for the purpose of promoting the league of nations idea among the secret societies of the world. The new organization expects to carry on an active propaganda inside the ranks of the fraternities through fraternity publications and speakers at lodge meetings and conventions. Headquarters will be established in New York.

The International Secretary, and active executive of this League, is Edward Russell Perry, of the Royal Arcanum. According to Mr. Perry, the new organization will strive to create opinion favorable to the formation, after the war, of a league of nations and the establishment of an international tribunal. To this extent it is in harmony with the general purpose of the League to Enforce Peace. Thus far, the founders have not committed themselves on the questions of enforced arbitration or of enforcing the decisions of the proposed international court. They favor, Mr. Perry says, leaving these points to the peace conference that will follow the war.

DEPENDS UPON DEFEAT OF GERMANY.

In announcing the establishment of The International League of Fraternities, Mr. Perry declared: "The league of nations and international court of justice which the League favors will be made possible only through the defeat of Germany in the present war, and to this end we shall need all our organized energies. The fraternities of this country represent about one-fourth of the population, and we expect to have most, if not all of them, in the League."

The officers of the new organization and the orders they represent follow:

President, E. H. Theis of New York, Loyal Order of Moose.

Vice-Presidents—T. M. Donnelly of Jersey City, Supreme Secretary of the Foresters; E. T. Lowry of New York, Woodmen of the World; H. F. D. Gillis of New York, Royal Arcanum.

International Secretary, Edward Russell Perry of New York, Royal Arcanum.

Treasurer, John W. Brophy of New York, Loyal Order of Moose.

—The League Bulletin

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JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, W. N. Lockhart, Po. 14383, care N. O. T. & L. Co.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, C. O. Nichols, Po. 15537, care Benton Harbor & St. Joseph Railway & Light Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman Edmond D. McCarthy, Po. 589-10, 41 East Eagle Street.

CHATTANOOGA—Wednesday, 12 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge, 1900 Continental & Commercial Bank Building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, Joseph C. Bowman, Po. 6275, care H. W. Johns-Manville Company.

CLEVELAND—Regular meeting, Thursday, 12 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Ry. Power & Light Co.

DALLAS—First and third Mondays, Hotel Adolphus, 12:15 p. m. Secretary, E. E. Roessler, Po. 12128, P. O. Box 1506.

DAYTON—First and third Mondays of each month, 12 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Co.

DENVER—Wednesday, 12:15 p. m., Kaiserdorf Hotel. Secretary, R. Arnold Lewis, Po. 11514, care Edins Lamp Works.

Detroit, meetings Saturday, 12:30 p. m. Grill Room, Board of Trade, Secretary, R. J. Kirchner, Po. 5199, care General Electric Company.

EAU CLAIRE.—First Monday each month. Secretary, Gurth Williams, Po. 18268.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Co.

GALVESTON—Meet on call. Secretary, Howard Jolly, Po. 16826, care Postal Tel. Co.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Co.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Co.

INDIANAPOLIS—Monday, 12:15 p. m. Secretary, A. H. Smith, Po. 13580, care Ford Motor Car Co., 1315 East Washington Street.

KANSAS CITY—Every other Friday, 12:15 p. m., Sexton Hotel, Secretary, T. R. Harber, Po. 18908, 1500 Grand Avenue.

LA CROSSE—First Thursday each month, Elks Club, 6 p. m. Secretary, Dan. J. Whalen, Po. 16022, care Thill-Manning-Whalen Co.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Co.

LOS ANGELES—Wednesday, 12 m., Jahnke's Tavern, 534 S. Spring St. Secretary, Clifton Peters, Po. 12734, 108 Edison building.

LOUISVILLE—Tuesday, 12:15 p. m., Hotel Henry Watterson. Secretary, C. C. Dicken, Po. 16660, care Louisville Gas & Electric Company

Mansfield, date and place of meeting from Secretary, Ed. Snyder, Po. 19753, care Ohio Brass.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel. Secretary. W. R. Murphy, Po. 14021, care Meadville Tel. Co.

MILWAUKEE—Tuesday, 12 m., Maryland hotel. Secretary, George J. Kirchgasser, Po. 15435, 178 Eighteenth St.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

MUSKOGEE—Secretary, J. H. Schmidt, care Muskogee Gas & Electric Co.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Co.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne St., New Orleans, La.

NEW YORK—First Wednesday each month, 12:15 p. m., Browne's Chop House, 1424 Broadway. Secretary, H. E. Cleland, Po. 18656, care Electrical World, 239 West Thirty-Ninth Street.

OKLAHOMA CITY—Monday, 12:15 p. m., Lee Huckins Hotel. Secretary, A. L. Mullergren, Po. 18853, care Berham Engineering Co.

PEORIA—First and third Saturdays of each month, 1 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Co.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon St.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, J. H. Van Aernam, Po. 14051, care General Electric Co.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's restaurant, Kellog street. Secretary, J. O. Roser, Po. 10412, care General Electric Co.

RICHMOND — Third Wednesday of each month, Business Men's Club. Secretary, L. E. Walker, Po. 6610, care Western Electric Co.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Co.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Secto avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Co.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Ridpath, Po. 7739, 505 Rialto building.

SPOKANE—First and third Wednesdays of each month, 12 m., Davenport's hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Co.

STARK COUNTY—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

ST. LOUIS—Tuesday, 12:15 p. m., Mercantile Club. Secretary, Geo. McD. Johns, Po. 9052, Room 401, City Hall.

ST. JOSEPH, MO.—Secretary, W. R. Thomas, Po. 1489, care American Elect Co.

TULSA, OKLA.—Monday, 12 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G. Walker, Po. 6871, 18 West Third Street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Co.

WICHITA—First and third Mondays of each month, 12 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Co.

WINNIPEG—Every other Wednesday, 12:15 p. m., Hotel St. Charles. Secretary, C. T. Kummen, Po. 15957, 386 Donald Street.

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THE JOVIAN

Volume Twelve JANUARY, 1918 Number Two

JOVIAN WAR SERVICE BUREAU

BIG BROTHER JOVIANS

By ELL C. BENNETT, Po. 3932-13
MERCURY

THE ORDER'S DUTY

The Jovian Order not only improves to the utmost of its resources and ability every opportunity that presents itself to render assistance anent the war activities of our Government, but it constantly SEARCHES for new ways in which it may be allowed the privilege of being useful.

Not any organization of any character deserves support, during this needful period of our country and cause, unless it does likewise.

THE ORDER'S OPPORTUNITY

Never before in the history of the Order has Jovianism had ready to its hand such splendid possibility of demonstrating the value of the organization of an industry, and such wonderful opportunity to justify all the labor and love that has been freely given to the welding of it as an instrument for unified and effective action.

Complete comprehension of maximum possibilities leads us to restlessness of mind and earnestness of endeavor that no channel of helpful effort may be overlooked.

Ten thousand restless minds may discover much which twenty minds would not discern—hence, these paragraphs.

That we may not waste time and effort in ground that has been tilled, let us review quickly what the Order has accomplished and is now doing with enthusiasm and glad patriotism:

THE ORDER'S RESPONSE

(1) Organized support of the sale of Liberty Bonds. In a number of cities the Jovian Leagues finished bond campaigns one hundred per cent pure—every member bought at least one bond.

(2) The preceding paragraph also holds true of Red Cross, and Y. M. C. A. drives, and those of similar bodies for members and funds.

(3) A start is now being made on the Thrift Stamp campaign.

(4) Every Jovian who enters the military or naval service of either the United States or any of her allies is being carried as in good standing without dues payment; his JOVIAN and other material reaches him whenever his address is available.

(5) We are using The JOVIAN constantly for the publication of articles for which publicity is desired by the various departments of the Government.

(6) The Jovian Employment Bureau is being utilized to secure much-needed men for Government service.

WHAT THOUGHT WILL YOU CONTRIBUTE?

Still we are not satisfied; we feel that there must be many other useful services the Order can perform—and WE WANT EVERY JOVIAN TO THINK THIS OUT AND MAKE SUGGESTIONS.

Don't, please, now fail to give the Jovian Central Office the benefit of your advice, and then later, perhaps, wonder why it did not adopt some helpful plan that ONLY YOU COULD HAVE THOUGHT OUT.

Also, do not hesitate to send along an idea because you are not positive it will be adopted. If only one plan out of ten received by the Central Office is capable of practical operation, the effort required for sending all ten will be more than justified.

ONE ENLARGEMENT NOW IN THE MAKING—THE BIG-BROTHER-JOVIANS

The Central Office has conceived and is working upon one enlargement of present activity that gives promise of excellent results. The plan sprung from the ever-recurrent thought of the writer:

"We are not doing enough for our Jovians who have sacrificed much, and are daring the Great Adventure, that our own homes and lives may be safe.

"We are a Great Order, a Splendid Brotherhood welded by every tie of blood and fraternity, and what has been done?

"We have said: 'We will not charge you for that which you can not use, while you are risking your lives in our cause; and we will send you news about ourselves when it is possible.'

"It is not enough. IT IS NOT ENOUGH! Men of Jovianism it shall be our eternal shame if we do not do for those Jovian boys not less than we would have done unto us, were we uprooted from home and friends and transplanted to a world of trial, and suffering, and mayhap death."

And here is the answer:

Every stay-at-home Jovian must be not only a contributor of the small annual dues which keep the Order alive and permit it to be useful, but, a willing unit of intelligence and energy in making of The Jovian Order A BIG BROTHER TO EVERY WAR-SERVICE-MEMBER.

A BIG-BROTHER-JOVIAN in the best, the largest, the most complete, the most sentimental, the most sympathetic, and most practical, the most helpful, the most efficient sense of that word—combination.

A never-sleeping, always-on-the-job, powerful BIG-BROTHER-JOVIAN right on the ground where any service is needed that would be asked of a BIG BROTHER, and doing that service just like a BIG, LOVING BROTHER would do it for the "kid" brother who needed it.

Do you grasp it? Do you see its splendid possibilities? We know that you do, and that you will do your part unhesitatingly.

Shall we be a trifle more specific? Very well.

Suppose the absent Jovian has a **real** big brother, or, has left his affairs in other capable hands?

Obviously in such a case the Order would not intrude, if it were not wanted or needed. But, it is difficult to imagine a condition existing where a group of local and national influential men could not be of some assistance. In any event there are hundreds of instances where there were no big brothers or others left behind; where the leave-taking was hurried; where important affairs were only partly concluded; the writer personally knows of a dozen or so. There will be thousands before Sammy comes marching home.

(continued on page nine)

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

All matter for the news columns of The Jovian, and advertising copy, should reach the Central Offices not later than the first of each month

Advertising rates on application

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INCREASED ACTIVITY IN JOVIANISM

ON OTHER pages in this issue of The JOVIAN will be found signs of increased activity of the Jovian Leagues throughout the country. In several cities good Rejuvenations have been held, and the dates have been set for a number of other Rejuvenations to be held during the month of January, reports from which have not been received by the Central Office at the time of going to press. In addition, a number of other Leagues have made applications for Jovian Charters. These Leagues are in various parts of the country, which shows that the renewed activity is not confined to any one section.

In the last issue of The JOVIAN, Mercury set forth very clearly the advantages of chartering leagues; why there was everything to be gained by it and nothing to be lost by the Leagues. He also pointed out the necessity for increasing the Jovian membership to reimburse the Order for the loss in revenue it will sustain by dividing the dues equally with the Leagues.

In Texas, and the Southwest, members of the fraternity are making a strong drive to make this a banner year in increased membership, and the prospect appears good for that section to exceed its quota of increase, as Jupiter Strickland has been promised close co-operation by the leading Jovians.

New York City has inaugurated a big drive for new members and good results are predicted.

From the report of prospects coming from various Leagues there is much encouragement for the belief that a satisfactory increase in membership will be registered, but every officer of the Order should give the matter his attention and see to it that a Rejuvenation is held in every city.

By the time this issue of the magazine is distributed there will not be much time left to hold a Rejuvenation before the expiration of the date (January 31) to which time the initiation fee is waived.

Beginning with February 1, the initiation fee will be $5.00. That is but half of the original fee, and the reduction should stimulate the work of adding new members throughout the year.

There is a splendid opportunity for Jovianism to gain strength during the year before us. This opportunity exists in the facts that there is a greater need than ever for a closer co-operation in the electrical industry, and in the provisions that have been made to identify the interest of the local Leagues financially with that of the Order in the collection of dues, and by providing a specific monetary value in Jovian membership by the saving made possible by the Jovian insurance plan.

The more thought and attention the members of the fraternity give to the new arrangement of dividing the dues equally with the Leagues, the more obvious will be the value to the Leagues of the plan. Not only will it produce a greater revenue for local Leagues but it will serve to unite Jovianism more closely with the local bodies by having both the League and the Order dues consolidated. This will yield an influence in bringing non-League Jovians into the League and non-Jovian League members into the Order.

These tangible benefits should be of great value in bringing new members into the Order. Heretofore we have not offered anything like the direct dollar-and-cents return as that contained in the saving made possible by the insurance benefit now open to members. It is very easy to demonstrate this by comparing the Jovian policies with those issued by other high-grade companies.

At the rate Jovians are taking advantage of the insurance it is probable by the end of the year that this saving to members will amount to more than all the dues paid into the Order. If the entire membership takes advantage of it the amount saved will be many times greater than the dues paid.

However, in order to bring about the desired increase in membership, it will be necessary to do some real constructive work. That is the needed essential right now. There is a call for a number of members to "go over the top" in every League and in every city and town where there should be a League.

At present the signs plainly show that a number of members have answered the call. Let's make it a drive!

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Jovian War Service Bureau

(continued from page seven)

What can THE BIG-BROTHER-JOVIANS do?

Countless things! Things that neither you nor I could possibly think of until the emergency arrived! Not only practical, material things, but things hard to set down on paper—the sort of friendliness, and cheerfulness, and understanding, and tactful sympathy that a BIG BROTHER would, we'll say, extend to the wife, or sister, or mother of the little brother who had been killed in the service of his country.

Or, there might be—

(1) The matter of the collection of a disputed insurance policy, or other sorts of claims.

(2) Advice about the management and operation of some little business, store, agency, what-not, which the wife, or the sister, or the mother was trying to keep alive until the boy returned.

(3) Or the selling of such a business; or the rentals and repairs of some little property.

(4) Or the boy might be wounded, or captured, or both, and the "folks" could secure no word of him.

(5) If captured, the sending of food and cheer; or the possibility of influence to secure an exchange for other prisoners.

(6) Or the reverse of the picture—sickness at home, or lack of word from home, with the boy abroad worried and helpless.

(7) And, then, there comes Christmas; and, again, organized sending of cards and letters from friends and acquaintances (how easy it is to let the stress of business interfere and put such things off to the never-coming tomorrow; how much such things must mean to the man on the other side.)

HOW THE BIG-BROTHER-JOVIAN MAY OPERATE

The Central Office is busy whipping all these ideas into shape, and when it is through the plan will be complete, specific and workable. That is the big feature—it is entirely practical—due to Jovian labors—and can be put into active operation immediately and through ready-made Jovian channels.

Once again the Order proves the value of, and necessity for, local organization linked with centralized direction and "clearing" facilities.

This effort will extend to every Jovian, to every man who has ever been a Jovian. That we do not include every man who has gone from our greatest of industries—that, in fact, we do not include every soldier and sailor abroad, is due not to lack of the capacity of Jovianism for helpful desire and sympathy, but to the Jovian tradition of undertaking only that which it can accomplish successfully.

That you may have some knowledge of the plan as it is today unfolding—it is purposed to appoint:

(1) A national group of BIG-BROTHER-JOVIANS made up of the most influential men of the electrical industry; men important enough to be heard in Washington with resultfulness despite the hundreds of thousands of voices that will sooner or later be clamoring there.

(2) A local group of BIG-BROTHER-JOVIANS, composed of local electrical men of the highest type, in every city which has given of its Jovians to the demands of war.

(3) A monthly letter from the Central Office to every Jovian warrior, with advice of the BIG-BROTHER-JOVIANS' readiness to serve, and a word of cheer and goodfellowship.

(4) All needs and information to be cleared through the Central Office, forming the link between the boy abroad and the "folks" or condition at home, whether the necessity or news may initiate at one or the other end of the chain.

(5) All appointments to be made by Jupiter; the national within his discretion alone; the local with regard to the desires of the Jovians of each locality as expressed to the Tribune.

DO YOUR FIRST BIT NOW

It is obvious that an essential element in our BIG-BROTHER-JOVIAN plan is the securing of the name, address (branch of service, regiment, company) and title of every Jovian who should benefit under it. To a great degree we must depend on our stay-at-home members to furnish this information, because the Jovian who is going has little time or thought for this detail.

You can do your first bit NOW to help this plan to succeed by at once sending to the Jovian Central Office the desired information on every man you know who is a Jovian—or who ever has been one—who has joined the colors.

So much we give you of our BIG-BROTHER-JOVIAN plan, that you may know that the Central Office is not asking for suggestions without squeezing from its own brain all that gives promise of virtue, and that you may help that office compile its list of Jovian soldiers and sailors.

The plan when completed will be given you in detail and to the industry at large so that none of its potential value may be lost.

Still we are not satisfied. There must indeed be a great deal more that we can do. And so—

Lend us, friends, Jovians, countrymen, not only your ears, but your minds and tongues, and hearts and hands, to the glorious end that no deed of usefulness, within the power and ken of this our beloved Order, shall be withheld in this the time of our Brother's and our Country's need.

* * * *

Be great in act as you have been in thought.—Shakespeare.

* * * *

Shun idleness. It is the rust that attaches itself to the most brilliant metals.—Voltaire.

FRANK D. BEARDSLEE, Po. 3931V, Fourteenth Ajax, sales manager for the Union Electric Light & Power Company of St. Louis, who has joined the official staff of the Mercantile Trust Company of that city. He still retains his connection with the lighting company in the capacity of assistant secretary. Former Congressman Beardslee has been very active in Jovian affairs since his affiliation with the Order in 1911. As Tribune for St. Louis, in 1914, he set a record with 467 candidates Rejuvenated during his term that has never been surpassed. His record for one class was 266. This was only exceeded once, by the Chicago League, which Rejuvenated 325 at one time. Jovian Beardslee has a host of friends who will be pleased to know of his success, and also that he will still continue to devote part of his time to the electrical industry.

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Read Pages Seven and Nine and Then—Now—
At Once Send in Your Dues That Must Be
Paid If This Useful Work Is To Continue

ELECTRICAL CONTRACTORS AND JOBBERS HOLD MEETING IN ST. LOUIS

A JOINT meeting held under the auspices of the Co-operative Committee of St. Louis Contractors and Jobbers, including the regular meeting of the Missouri State Association of the National Electrical Contractors and Dealers, was held in St. Louis, January 5. The meeting consisted of two day sessions, morning and afternoon, held in the Century Building, and an evening session held in the form of a banquet at the American Annex Hotel.

The morning and afternoon sessions were devoted to reports of standing committees, and the following chairmen presented papers: Industrial Development, Gus Schwedler, Po. 9587-55, Kansas City; Universal Data and Sales Book, O. L. Fickie, Po. 13802, Kansas City; Liability Insurance, W. L. Hutchison, Po. 1325, Kansas City; Merchandising, J. J. Magee, Po. 15559.

In the absence of E. H. Heath, Po. 839, chairman of the credit committee, W. J. Burton, Po. 11565, read a paper on "The Value to the Contractor of Trade Acceptances."

Owing to the limit of time of the meeting, several committees were unable to report.

Fred B. Adam, Po. 242-82V, state chairman of the Missouri Association and also chairman of the Co-operative Association, presided at all the meetings. He was assisted in arranging and conducting the meetings by W. F. Gerstner, Po. 18531, secretary of the Missouri State Association; R. E. Stewart, Po. 11738, secretary of the Co-operative Association and the convention and meetings committee; W. J. Burns, Po. 13798, chairman; W. A. Koeneman, Po. 800, and C. J. Sutter, Po. 330.

There were 340 members of the industry in attendance at the evening meeting.

Wm. L. Goodwin, Po. 1038, author of the "Goodwin Plan," was the principal speaker, and outlined the plan for the proposed organization of the industry in detail.

At the conclusion of his address a general discussion of the plan was indulged in by those in attendance.

A campaign conducted during the meeting resulted in the filing of thirty-seven new applications for membership in the organization.

GEORGE ADE SAYS WE MUST WHIP GERMANY OR REVISE MORAL CODE

NEW YORK, December 24—George Ade has written the following as a "holiday message to our young fighting men." He contributes it to the National Security League's campaign of patriotism through education.

By GEORGE ADE

WE MUST win the big war or else revise all moral codes, rewrite all proverbs and adopt a brand-new set of rules to govern conduct. We have accepted certain time-honored adages as self-evident truths.

We found them in our early copy books, and we grew up on them and repeated them so often that naturally we came to think that they could be relied upon.

Then Germany came along with an intensely modern variety of ethics bearing the label of kultur.

The new medicine is not taken internally or rubbed on as a liniment, but you have it shot into you by a large gun.

Unless we refuse to take the treatment, everything that we ever believed in will be overruled, discarded and thrown into the alley.

If Germany is not licked to a standstill, we might as well begin to memorize and humbly accept the following:

Dishonesty is the best policy.

Be as mean as a skunk and you will be happy.

Blessed are the child murderers, for they shall inherit the earth.

Be sure you are right handy with firearms, then go ahead.

An evil reputation is better than riches.

Truth crushed to earth will not rise again if the crushing is done in a superior and efficient manner. Be virtuous and you will be miserable.

Thrice armed is he who goes around picking quarrels.

Might makes right. Hell on earth and hatred for all men.

Do unto others as you suspect that they might do unto you if they ever get a chance to be as disreputable as you are.

God helps the man that helps himself to his neighbor's house and his fields and his unprotected women.

Those don't sound right, do they?

The old ones that we learned first of all are not yet out of date.

Suppose we don't revise them.

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Personal Pointers

Old Time has swung his scythe again
A New Year to begin,
And cut a mark across the lane
We mortals wander in.
I do not wish him ill or harm
Or cause him work to do,
But I do hope he'll have to mark
A lot of years for you.

* * * *

Geo. B. Foss, Po. 2718, formerly city electrician of Opelika, Ala., has been appointed superintendent of the light and power department of that city.

* * * *

T. J. Sprangle, Po. 13667, who until recently was manager of the Kentucky Utilities property at Somerset, Ky., is now in charge of that company's properties at Elizabethtown, Ky.

L. O. RIPLEY, Po. 7042V, Sixteenth Ajax, Wichita, Kansas. Congressman Ripley won a Vulcan Degree membership as local chairman during the One Hundred Point Committee campaign last year. He has taken an active part in Jovian affairs, and his selection for the office of Congress is promise to his district of a successful administration.

J. W. Tabb, Po. 6259, has been transferred to the New York City office of the Western Electric Company. He was formerly manager of the San Francisco branch of that company.

* * * *

Samuel Kahn, Po. 373, was re-elected vice-president and general manager of the Western States Gas & Electric Company of San Francisco at a recent meeting of the directors of that company.

* * * *

Andrew Nelson, Po. 18422, formerly with the Minneapolis General Electric Company, is now connected with Chicago district office of the Westinghouse Electric & Manufacturing Company.

* * * *

W. M. Krise, Po. 4823, who until recently was manager of the Jefferson Electric Company, Punxsutawney, Pa., became connected on December 1 with the Ohio Service Company, at New Philadelphia, Ohio.

* * * *

W. H. Kornbeck, Po. 10944, who has been associated with the Illinois Electric Company for a number of years, is now connected with the sales staff of the Trumbull Electric Manufacturing Company of Chicago.

A. S. WITMER, Po. 16690, who has succeeded Robert Montgomery, Po. 6147, Statesman-at-Large, as commercial manager of the Louisville (Ky.) Gas & Electric Company. Jovian Witmer was promoted from the position of power salesman. He has been with the company since 1913, and was formerly in the employ of the Louisville Lighting Company. He is a graduate of Syracuse University, Electrical Engineering Class of '95.

R. H. Wright, Po. 5775, who until January 1, was with the engineering department of the Cleveland Electric Illuminating Company, is now connected with the Guarantee Specialty Company of Cleveland.

* * * *

Ernest L. Shotwell, Po. 13666, who has been superintendent of the Kentucky Utilities Company property at Versailles, Ky., has been transferred to a similar position with the Somerset property of the company.

* * * *

C. M. Scott, Po. 19909, formerly Cleveland representative of the Detroit Fuse & Manufacturing Company, is now associated with the Western Electric Company, and will continue to make Cleveland his headquarters.

* * * *

J. P. Hutcheson, Po. 8344, formerly connected with the Pittsburgh district of the Westinghouse Electric & Manufacturing Company, has accepted a position with the Electrical Engineering & Manufacturing Company of Pittsburgh.

* * * *

W. R. Emerson, Po. 19808, is now general manager of the Oklahoma Gas & Electric Company properties, with headquarters at Oklahoma City. Jovian Emerson was formerly auditor for the Muskogee (Okla.) Gas & Electric Company.

* * * *

P. T. Davies, Po. 8818, Sixteenth Triton, who was formerly connected with the Montreal Light, Heat & Power Company, has resigned his position with that company and is now commercial manager for the Southern Canada Power Company, Ltd., Montreal.

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GEORGE HULL PORTER, Po. 194, Tenth Vulcan, Chicago, railroad representative for the Western Electric Company, who was recently elected president of the Illinois Athletic Club, an organization consisting of three thousand members. The Jovian Order is well represented in the membership of the I. A. C. and, needless to say, Jovian Porter had enthusiastic support in his campaign for the office

JOHN HAYS SMITH, Po. 1874, who was formerly connected with the Westinghouse Electric & Manufacturing Company and was one of the editors of the Electrician and the Electrical Age, was recently appointed assistant engineer of the State Public Service Commission, Harrisburg, Pa.

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T. P. CAGWIN, Po. 7905, formerly commercial manager of the Cleveland Telephone Company, has been appointed manager of the Statler Hotel at Cleveland. Former manager of the hotel, O'Connor, will be given the management of the new Pennsylvania Hotel, being built in New York City.

* * * *

F. R. COATES, Po. 16245, president of the Toledo (Ohio) Railways & Light Company and chairman of the Toledo Board of National Defense, was recently appointed one of a committee of ten, by Governor Cox, to visit and inspect the military training camps at Fort Sheridan, Ala., and Camp Sherman, at Chillicothe, Ohio.

* * * *

HAROLD C. WYATT, Po. 6113, representative for the Northwestern Electric Equipment Company, of Duluth and St. Paul, in Southern Minnesota, has been transferred to Montana and given a larger field. He has been connected with the company for eleven years and has had charge of the Minnesota territory for the past six years.

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J. C. NICHOLS, Po. 4938, has resigned as manager of the Union Gas & Electric Company of Bloomington, Ill., to accept the position as manager of the Bluefield (W. Va.) Gas & Power Company. Before his connection with the Bloomington company, Jovian Nichols was representative for the Elmira (N. Y.) Water & Light Company.

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L. G. VAN NESS, Po. 3346, has resigned as vice-president of the Memphis (Tenn.) Gas & Electric Company, to engage in consulting work. He will remain in Memphis and will probably open offices in that city. Jovian Van Ness was active head of the Merchants Power Company for several years and was active in bringing about the consolidation of the companies.

* * * *

E. A. WRIGHT, Po. 15827, has been appointed manager and contract agent of the Great Bend (Kan.) Water & Electric Company and the Hoisington Electric & Ice Company, succeeding J. R. MURPHY, Po. 15817, resigned. Jovian Wright is a graduate electrical engineer and was connected with the engineering department of the Allis-Chalmers Manufacturing Company, Norwood, Ohio, for several years.

* * * *

J. ROBERT CROUSE, Po. 260-8V, Past Jupiter Seven, has been appointed director of sales of the war saving certificate stamps for the district of Cleveland and Cuyahoga County. Past Jupiter Crouse has taken a very active part in Red Cross and Army Y. M. C. A. campaigns in Cleveland and the surrounding territory, and while his selection for this important task by the Government will impose a heavy duty upon him, the work could not have been placed in better hands.

* * * *

THEODORE MALM, Po. 11127, who has been electrical and mechanical engineer for various properties of the Mackenzie-Mann Company for the past six years, has established two companies, The Railway & Power Engineering Company, Ltd., and Theo. Malm & Company. The former company will deal in railway light and power equipment, while the latter will undertake surveys, plans and estimates for the development of electric power, prepare plans and specifications and supervise the work of electric street and interurban railways and mining electrification. The offices of the two companies are in the Pacific Railway Building, Toronto, Canada.

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GALVESTON HOLDS ELECTION OF OFFICERS

ARRANGES FOR BIG REJUVENATION

THE GALVESTON Jovian League held a meeting at the Brush Electric Company, January 3, at 8:00 p. m., for the purpose of electing officers for the ensuing year and to arrange for a Rejuvenation.

L. M. Kelsey, Po. 11350, vice-president of the League, called the meeting to order.

On motion, W. R. Phipps, Po. 10676, was made temporary chairman of the meeting.

The election of officers resulted as follows: President, L. M. Kelsey, Po. 11350; vice-president, R. A. Wood, Po. 11038; secretary-treasurer, W. A. Eicher, Po. 18683.

Then followed the report of officers and committees. Retiring secretary-treasurer, Howard Jolly, Po. 16826, made a report of the financial condition of the League.

S. C. Harrington, Po. 4979, submitted an application and was admitted to membership in the League.

After deliberations, it was decided to hold a Rejuvenation January 31. C. W. Gernand, Po. 10638, was appointed chairman of the arrangement committee, and President Kelsey was made chairman of the membership committee.

Another meeting will be held January 17, to perfect the final arrangements for making the affair a big success.

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NEWS OF JOVIAN LEAGUES

Kansas City The success of moving the meetings of the Kansas City League to a "downtown hotel" has been fully demonstrated. The attendance has been almost doubled. There were about seventy-five members at the November meeting, and equally as many at the mee ing December 21. The luncheons are now being held at the Hotel Muehlebach.

At the meeting of December 21, A. Penn Denton, Po. 1415V, president of the League, presided.

Captain R. W. Simmie, M. C., formerly with the Canadian forces at the battle front, was the speaker of the day, and took for his subject "Trench Weapons and Warfare."

Major Norton and Lieutenant Robinson, two officers of the Engineers' Corps of Fort Leavenworth, were guests of the League.

E. L. Fouch, Po. 836, presented the League with a service flag. It contains eleven stars, honoring the eleven enlisted members of the Kansas City League, who are: Chas. R. Born, Po. 18109; R. P. Bailey, Po. 19134; R. H. Cowdry, Jr., Po. 19146; C. H. Taylor, Po. 18131; F. W. Gary, Po. 18906; A. E. Herzberg, Po. 15813; P. J. Kealy, Po. 16571; K. D. Klemm, Po. 16572; W. E. Saylor, Po. 15564; W. S. Woodland, Po. 19203, and L. E. Shoemaker.

* * * *

San Francisco There was a record attendance present at the meeting of the San Francisco League, November 28. The affair was designated "Old Timers' Meeting," as a tribute to six old time members of the industry: H. V. Carter, Po. 858, formerly of the Pacific States Electric Company; Frank Smith, of the Western Electric Company; E. B. Strong, Po. 998, of the Journal of Electricity; S. V. Mooney, of John A. Roebling's Sons Company; T. A. Addison, Po. 6967, General Electric Company, and John A. Britton, Po. 7380, of the Pacific Gas & Electric Company.

* * * *

Los Angeles The Los Angeles League designated its meeting of November 28 "Ladies' Day." Two splendid addresses were made. Judge Thomas P. White took for his subject "The Golden Rule" and Claire Hosler Coombs, lecturer, entitled his address "Over No Man's Land with Dogs and Horses."

E. R. Northmore, Po. 10763, presided as chairman of the meeting, December 5, and introduced as speaker of the day, Judge Benj. F. Bledsoe, of the United States District Court, who took for his subject "Americanism."

* * * *

Chicago Judge Bernard P. Barasa addressed the League meeting, November 22. Announcement was made that the League's donation to the Red Cross from receipts of the July outing amounted to a total of $462.70.

Nine new applications for membership were received.

Announcement of two tickets for officers of the League for the ensuing year was made December 6. Besides the regular ticket nominated by the nominating committee, a members' ticket was put up, by petition. This was the first time in several years there has been opposition to the ticket nominated by the nominating committee.

The platform of the regular ticket was made public, as follows: Increase in membership to 1,000. Permanent quarters. Greater social activity. Greater participation in civic affairs. Continuation of the splendid committee work performed in 1917. Continuation of effort to provide for the comfort and welfare of members in the Government service and their families.

B. E. Fernow, of the Cutler-Hammer Company, was the speaker of the day, and presented a very interesting address on the use of the electric magnet. His address was illustrated with moving pictures of some of the tasks being performed by magnets.

Sergeant Wm. L. Geuder and F. W. Harvey made addresses before the League, December 13. Frederick A. Vose made an appropriate address in presenting the League with the service flag made by Mrs. L. C. Spake. George Drake Smith, assistant to Thos. A. Edison, was present at the meeting and presented a message from the "Grand Old Man," which was in substance to work every minute towards the defeat of our enemies.

E. B. SNYDER, Po. 19753. First Tribune, Mansfield, Ohio, who has started his administration with the Rejuvenation of twenty-four candidates. This start presages that he will keep up the good work done in Mansfield during the past year and perhaps set a new high record for Jovian activity in that city.

This being the annual meeting, the regular ticket was declared elected: President, Frederick M. Rosseland; first vice-president, E. A. Rumler; second vice-president, Harry A. Porter; secretary-treasurer, W. H. Hodge.

Thirty-five new members were elected to membership in the League. This brings the total membership of the League up to 593.

"The King of the Rails," the Chicago, Milwaukee & St. Paul Railway Company film, was exhibited at the meeting of December 20 by J. E. Kearns of the General Electric Company.

* * * *

Winnipeg Dr. James A. MacLean, president of the University of Manitoba, made an interesting and instructive talk before the Winnipeg League, November 29, on "Some Changes in Our Social View Points."

A motion was carried by the League to waive the dues of all enlisted members in active service until their return to civil life.

The meeting of December 13 was addressed by the Honorable T. A. Crerar, Minister of Agriculture for the Dominion of Canada, on "The Ideal of a Union Government."

Among the prominent guests present was Honorable T. C. Norris, Premier of the Province of Manitoba.

The meeting was held at the Fort Garry Hotel, where it has been decided to hold the meetings of the future.

Announcement was made that an active campaign for new members would be started January 1.

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St. Louis

The meeting of the St. Louis Jovian League of December 4 was held without a speaker. There was a good musical program, and everybody appeared to enjoy the fact they could converse through the luncheon hour without having to give their attention to a speaker. Inasmuch as the League has not been without a speaker at any luncheon for several years it was a real innovation.

Col. J. E. Fechet, who was scheduled to speak at the meeting of December 11, was suffering from a severe cold and could not fill his engagement. Sergeant A. A. Allen, of the British-Canadian Recruiting Mission, and Yeoman G. A. Mory, of the U. S. Navy, both made excellent addresses. Sergeant Allen had a wonderful experience at the battle front of France, having been wounded three times and sent back to the front each time after his recovery. Nor were the wounds he received of a slight nature. He gave a graphic description of trench warfare that was highly interesting.

Tuesday, December 18, was termed "Ladies' Day," and being the last meeting before the holidays, it was also designated "A Christmas Feature Meeting." The Allis-Chalmers Manufacturing Company was in charge, with C. L. Orth, Po. 11689, district manager of the company, presiding as chairman. He was assisted by Herman Spoehrer, Po. 3947.

The Speaker of the day was George Platt Knox, assistant superintendent of public schools, who delivered an illustrated lecture entitled "A Photographic Journey, Jerusalem to Bethlehem." Both the splendid pictures shown and the historic nature of the lecture made it highly entertaining and instructive.

* * * *

Cleveland

Dr. Jesse K. Marden, who recently returned from Turkey, addressed the Cleveland League, Tuesday, December 6. He took for his subject "The Old and New Regime in Turkey." During the time Dr. Marden spent in Turkey he came in contact with a number of high officials. He vividly described massacres and outrages perpetrated against the Armenians, Kurds and Arabs by the Turks, and asserted that German army officers were back of all of these outrages. He stated that these German officers were preparing for war against the United States two years before hostilities were actually declared.

Announcement was made that R. S. Dunning, Po. 16471, had resigned as secretary of the Cleveland League and had been succeeded by W. S. Clark, Po. 7266.

The secretary announced that war campaigns would continue to be one of the main branches of the League's work. The League will actively support the Red Cross campaign in February and the Liberty Bond issue in March. Suggestions were asked for plans for carrying out the work.

A. H. Gilbert, art director of the Lees Advertising Company, was the speaker of the meeting, December 13, addressing the League on "Electricity as a Factor in the Development of Brazil." Mr. Gilbert is a former resident of Brazil, and he was particularly enthusiastic about the wonderful commercial opportunities it will offer to the United States after the war.

A letter from Harry C. Turnock, Po. 5658, who is now an officer at the western front in France, extending Christmas greetings, was read to the League.

An appeal was made to the League, December 20, by Chairman Doolittle of the local exemption board for members to assist in the work of registering the men of Cuyahoga County who are of military age.

W. W. Bustard, pastor of the Euclid Avenue Baptist Church, was the principal speaker of the occasion. In his address, "The Terms of Peace," he emphasized the fact that the Allies must avoid a German-made peace, and expressed his belief that it would only lead to a greater war in the future.

Announcement was made of an informal party to be held in the clubrooms, New Year's Eve, starting at 9:00 p. m., at which there would be dancing and a number of novel features that were being planned by the entertainment committee.

CHAMPIONS FOR 1917 IN THE SPORT WORLD

BASEBALL

WORLD'S CHAMPIONS: Chicago White Sox.
NATIONAL LEAGUE: New York Giants.
AMERICAN LEAGUE: Chicago White Sox.
AMERICAN ASSOCIATION: Indianapolis.
INTERNATIONAL LEAGUE: Toronto.
PACIFIC COAST: San Francisco.
SOUTHERN ASSOCIATION: Atlanta.
WESTERN LEAGUE: Des Moines.

COLLEGE FOOTBALL

NATIONAL CHAMPIONS: Georgia Tech.
EAST: University of Pittsburgh.
WEST: Ohio State University.
MISSOURI VALLEY: University of Nebraska.
SOUTHWEST: Oklahoma A. and M.
PACIFIC COAST: University of Washington.

SOCCER FOOTBALL

NATIONAL CHAMPIONS: Fall River Rovers.

BILLIARDS

BALKLINE: William F. Hoppe.
THREE CUSHION: Alfredo de Oro.
POCKET BILLIARDS: Frank Taberski.

GOLF

NATIONAL AMATEUR AND OPEN: Charles A. Evans (held over from 1916).
NATIONAL WOMEN'S: Miss Alexa Stirling (held over from 1916).

TRACK AND FIELD

TRACK EVENTS: A. E. Ward, 100 and 220 yards; E. Shea, 440 yards; M. Devanney, half mile; J. W. Ray, one mile; H. E. Barron, low hurdles, and H. F. Loomis, high hurdles.

FIELD: C. Larson, high jump; J. Irish, broad jump; E. Knourek, pole vault; A. Mucks, discus throw; P. Ryan, hammer throw; A. Muck, shot put.

BOXING

HEAVYWEIGHT: Jess Willard.
LIGHT HEAVYWEIGHT: Billy Miske.
MIDDLEWEIGHT: Mike O'Dowd.
WELTERWEIGHT: Ted Lewis.
LIGHTWEIGHT: Benny Leonard.
FEATHERWEIGHT: Johnny Kilbane.

WRESTLING

WORLD'S HEAVYWEIGHT: Earl Caddock.
LIGHTWEIGHT: Jack Fisher.

TENNIS

NATIONAL SINGLES: R. Norris Williams II.
NATIONAL DOUBLES: M. W. Johnston, C. J. Griffin.
NATIONAL WOMEN'S: Miss Molla Bjurstedt.
WOMEN'S DOUBLES: Miss Molla Bjurstedt, Miss Eleanor Sears.

SWIMMING

MENS CHAMPIONSHIP: Sprints, Duke Kahanamoka; Distance, Norman Ross.

WOMEN'S CHAMPIONSHIPS: Sprints, Miss Dorothy Burns; Middle Distance, Miss Claire Gilligan; Long Distance, Miss Lucy Freeman.

TURF

TWO-YEAR-OLD COLTS: Sun Briar.
THREE-YEAR OLD: Omar Khayyam.
AGED: Old Rosebud.

TROTTING AND PACING

PACING: Miss Harris M.
TROTTING: St. Francis.

AUTOMOBILING

NATIONAL: Ralph de Palma.

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DECEMBER REJUVENATIONS

WATERTOWN, WIS.

WATERTOWN Jovians held a Rejuvenation in the Wisconsin Gas & Electric Company's hall in that city on the evening of December 26. There were thirteen candidates initiated. First Tribune A. B. Scheurmann, Po. 17653, was in charge of the affair, and made an address outlining why a chartered League would benefit the local membership. He also explained the working of the Jovian Order directed towards benefits for the electrical industry.

At the conclusion of his address, arrangements were made for another meeting of the members on December 28, for the purpose of nominating and electing officers, drafting a set of by-laws and making formal application for a Jovian Charter.

The possibility of another Rejuvenation being held in the near future is very good, and one will probably be held during January, before the time has expired during which the initiation fee is waived.

According to reports at hand, First Tribune Scheurmann was given valuable assistance by Walter O. Wickler, Po. 17653, and the latter deserves special mention for his efforts in contributing to the success of the meeting.

* * * *

MILWAUKEE

MILWAUKEE Jovians have again come to the front, December 14, with one of those real red-blooded get-together Jovian affairs that have kept the League in that city right up in the front rank. This was a Rejuvenation and Joviation, and to judge by the reports received at the Central Office there can be little doubt that it was the most successful and enthusiastic affair that has taken place in the history of the League. That is saying a great deal, as Milwaukee Jovians have held some splendid functions in the past.

However, when we take into consideration the fact that there were forty-five candidates, ninety-four people in attendance, a splendid entertainment program, good speakers, with real live messages, a pretty good idea can be formed that it was what our Western friends would call a "Humdinger."

First Tribune Jos. W. Pfeifer, Po. 10981, was in charge of the candidates and was ably assisted by W. R. Patton, Po. 1090, Second Tribune.

The principal speaker at the Joviation was Lieut. William Masson, of the Canadian Royal Field Artillery, in charge of the British Canadian Recruiting Mission in Chicago. He spoke of trench conditions at the battle front.

S. B. Way, Po. 3950, general manager of the Electric Company, made an interesting address, as did also Capt. Harry Miessner, U. S. A., and C. J. Klein, Po. 1589.

W. R. Patton, Po. 1090, Fourteenth Argus, presided as toastmaster of the banquet.

Among the prominent candidates were: J. H. Gugler, vice-president Globe Electric Company; C. D. Baird, sales manager, Allen Bradley Company; W. C. Stevens, sales manager, Cutler-Hammer Company, and R. B. Snyder, sales manager, T. M. E. R. & L. Co.

Among the notable guests were: Col. Watrous, Civil War veteran; Mr. Van Peterson and A. B. Scheurmann, Po. 17653, First Tribune, Watertown, Wis.

Those deserving special mention for their activities in contributing to the success of the affair, according to reports, are: Frank Ziekursch, Po. 16625, Stanley Haskins, Po. 7359, and C. J. Brewster, Po. 15982.

The initiation ceremony was conferred by the following Degree Team: Jupiter, W. R. Patton, Po. 1090; Neptune, Carl Golin, Po. 12385V; Pluto, J. W. Pfeifer, Po. 10981; Vulcan, F. Ziekursch, Po. 16625; Mercury, W. A. Haig, Po. 16623; Hercules, M. J. Schmidt, Po. 17018; Mars, M. Brauns, Po. 16618; Apollo, E. Eckstein, Po. 15484; Avrenim, S. G. Haskins, Po. 7359; Imps, I. Douglass, Po. 18360, L. Marquardt, Po. 18365, R. H. Smith, Po. 7203, and H. Hutchinson, Po. 19086.

J. W. PFEIFER, Po. 10981, First Tribune, of Milwaukee, who aided and abetted by other loyal members of the Order, held a splendid Rejuvenation and Joviation in that city, December 14.

Reports made by both First Tribune Jos. W. Pfeifer, Po. 10981, and Statesman Carl Golin, Po. 12385V, presage that there is a splendid prospect for the Milwaukee League to make this its banner year for increased membership.

Its officers and members have made a fine start and are to be heartily congratulated for the work they are doing.

An exceedingly sad event following the gathering was the death of Charles J. Kline, Po. 1589, which occurred three days later. Jovian Kline was particularly active in contributing to the success of the meeting, and the report of his death came as a great shock to those who were present. An obituary notice of his death will be found on another page of this issue of the magazine.

* * * *

MANSFIELD, OHIO

BEGINNING activities almost immediately after his appointment, First Tribune E. B. Snyder, Po. 19753, rounded up twenty-four candidates for the Rejuvenation held in Mansfield on the evening of December 7. In addition to the candidates there were forty Jovians present at the beginning of the festivities at Eagles' Hall, at 7:30 p. m.

J. L. Stone, Po. 19724, presided as toastmaster at the Joviation, and W. C. Starkey, Po. 15840, was the principal speaker.

The regular form of initiation was used, and the following Degree Team performed the initiation ceremony:

Jupiter, J. L. Stone, Po. 19724; Neptune, C. C. Beck, Po. 15839; Pluto, R. F. Wise, Po. 15432; Vulcan, H. S. Robeson, Po. 13200; Mercury, E. B. Snyder, Po. 19753; Hercules, Jos. Parrott, Po. 19723; Mars, J. F. Sells, Po. 8797; Apollo, L. C. Dye, Po. 19917; Avrenim, H. A. Waite, Po. 19886, and Imps, H. C. McCutchan, Po. 10753; C. S. Williams, Po. 19757, and H. A. Ralston, Po. 19750.

At the conclusion of the ceremony, Tribune Snyder announced that another Rejuvenation would be held in the early part of January, to accommodate several members who could not be present, and that the prospects were very favorable for another class fully as large.

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$820,000.00 Annual P

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MAXIMUM (INDIVIDUAL) PROFIT $41

Should all who have joined the Order take advantage of the largest saving possible under the Jovian accident and health insurance plan their profit (saving) would amount to 20,000 x $41, or NEARLY A MILLION.

MINIMUM (INDIVIDUAL) PROFIT $13

When a Jovian invests in a $12-premium, five-thousand-dollar-principal, Jovian accident policy, he saves yearly the $13 difference between the price he pays and what similar protection would cost from any other source.

		MINIMUM	MAXIMUM
1,000	JOVIANS CAN SAVE ANNUALLY	$ 13,000	$ 41,000
5,000	" " " "	65,000	205,000
8,000	" " " "	104,000	328,000
10,000	" " " "	130,000	410,000
20,000	" " " "	260,000	820,000

$104,000 YEARLY PROFIT NOW LIKELY

If 8,000 members profit by this opportunity (this now seems likely) the amount left in Jovian pockets each year, to be used for the hundred and one emergencies of these critical times, will total at least $104,000. (We have used the smallest policy in our calculation to make the figures all the more certain of realization.)

Clip and Mail the Coupon Today

You are helpin Jovian ben

Why not reach out and acc not *do*

IF YOU SO DESIRE, DATE YOUR APPLICATION TO TAKE EFFECT WHEN SOME OF YOUR PRESENT INSURANCE EXPIRES — PAY NOT UNTIL YOU RECEIVE THE POLICY.

THE JOVI

SYNDICATE TRUST BUIL

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The Jovian Order is Not in the Insurance Business

The Jovian Central Office, however, has made possible this conservation of Jovian expenditure by making the solicitation and handling the transaction without charge, and by placing the insurance with a tried, reliable company, amply equipped for carrying the risks. Jovian interests are further protected in that none but Jovians can secure this insurance at any price.

You Should Share in This—Your Jovian Perquisite

If not carrying accident or health insurance, lose no time. Fill out and mail the attached coupon today. Particulars will come forward promptly.

If now carrying such protection (not Jovian) you are paying more for it than necessary. Use the coupon. Let us show you how to make a profit by getting your insurance for less money.

to pay for this
fit anyway

t what you pay for and why
now?

N ORDER

ST. LOUIS

EVERY DOLLAR YOU INVEST IN JOVIAN INSURANCE, RELEASES NEARLY ANOTHER DOLLAR FOR YOUR OTHER PRESSING NEEDS.

Sign—Tear Out—Mail NOW!

THE JOVIAN ORDER

GENTLEMEN:

Send me complete information relative Jovian Accident and Health Insurance at greatly reduced rates.

(Signed) .....

(Address) .....

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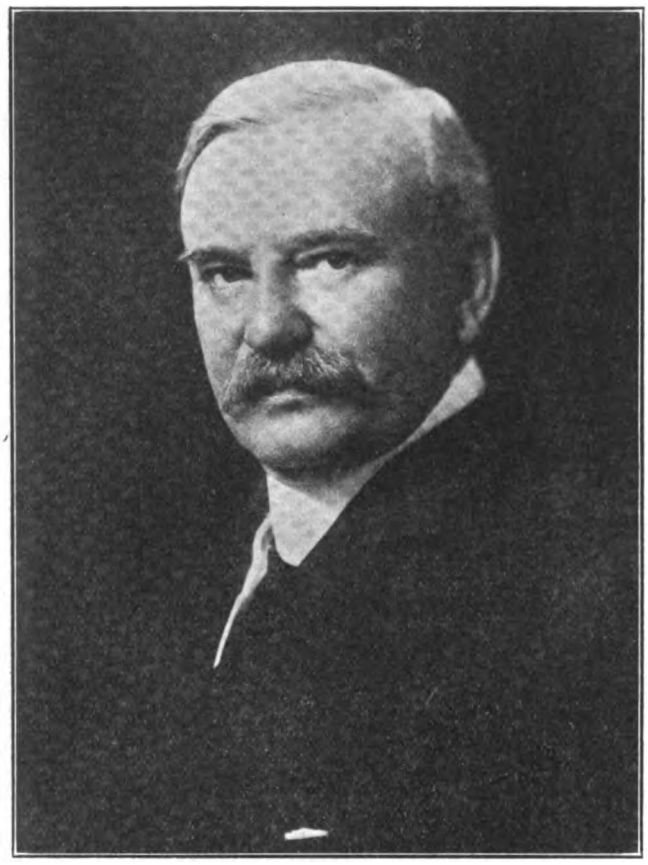
OBITUARY



JOHN HENRY GOEHST, Po. 3220-35, construction superintendent of the Commonwealth Edison Company and president of the Federal Sign System (Electric), died at his home in Chicago on New Years Day. Jovian Goehst had been with the Commonwealth Edison and its predecessor, the Chicago Edison Company, since 1892, and was the oldest employe of the company in point of service. He was widely known and well liked by electrical men throughout the country, being of a generous and warm hearted nature as well as a very able man. He was born in Chicago in 1864, and was one of the pioneers of the electrical industry. In addition to being a life member of the Jovian Order, he was connected with numerous other organizations, including The American Institute of Electrical Engineers, Chicago Athletic Association, Kenwood Club and South Shore Country Club. He is survived by his wife, who was Miss Clara Schulz before their marriage, and three small children. The Jovian extends the sincere sympathy and condolences of the Fraternity.

JULIUS ANDRAE, father of Frank T. Andrae, Po. 7343, and Henry P. Andrae, Po. 8776, founder of the firm of Julius Andrae & Sons Company, of Milwuakee, Wis., died at his home in that city December 1, at the age of eighty-eight. Mr. Andrae came to the United States from Bremen in 1854 and located in Milwaukee in the following year. During the year 1856 he opened a little shop at 225 West Water Street. Although he had given up the management of the firm to his sons, he took a great deal of interest in the business and was active until taken ill but a few hours before his death. In addition to two sons, he had six daughters: Mrs. Charlotte Schmidt, Mrs. Julius Dammann, Mrs. William H. Schacht, Jr., Henrietta, Emily and Helen, to all whom we extend the sympathy and condolences of the Order.

* * * *

CHARLES J. KLEIN, Po. 1589, designing engineer for the Cutler-Hammer Company, died at his home in Milwaukee, Wis., on the evening of December 17, from an attack of apoplexy. Besides being one of the best known and most popular men in the local industry at Milwaukee, Jovian Klein was one of the most active workers in the Milwaukee League, and had participated in the Rejuvenation and Joviation held in that city three days before his death. He was a personal friend of both Thomas A. Edison and Charles P. Steinmetz, and had visited the former at his home at Orange, N. J., during the fall. He was born in New York City in 1862, and located in Milwaukee in 1908. In July of the same year he became affiliated with the Jovian Order at a Rejuvenation held in Chicago. His loss will be keenly felt by the Milwaukee League and his host of friends. He is survived by one son, Henry C. Klein, of Yonkers, N. Y., and a sister, Elizabeth C. Klein, of New York City, to whom The JOVIAN extends the sincere sympathy and condolences of the fraternity.

* * * *

J. G. CUTLER, Po. 5984, who before his enlistment was manager of the Cutler Electric Fixture Company, Winnipeg, Manitoba, was killed recently at the battle front in France. Jovian Cutler was an active member of the Winnipeg League, and his death is mourned by a large number of friends.

* * * *

WILMINGTON, DELAWARE ORGANIZING LEAGUE

THAT Wilmington Jovians have set about organizing a big Jovian League in earnest is apparent from the amount of interest that has been aroused by the loyal members of the Order in that city. Headed by H. E. Shelton, Po. 14400, who is officiating as First Tribune, W. H. Hall, Po. 4786, Paul J. Brown, Po. 8126, C. J. Schaffer, Po. 2252, and other members, they have practically completed the work of organizing the local industry.

At the first meeting called for the purpose held at the offices of the Wilmington & Philadelphia Traction Company on the evening of December 14, thirty-four candidates signed applications for membership.

The goal set is one hundred new members, which, together with the present Jovian membership in Wilmington, will be the foundation for a first class League.

Another meeting will be held some time within the early part of January and will be followed promptly with a big Rejuvenation.

CHARTERED JOVIAN LEAGUES

Cincinnati	Charter	**No. 1**
Kansas City, Mo.	"	**No. 2**
Pittsburgh	"	**No. 3**
Minneapolis	"	**No. 4**
St. Joseph, Mo.	"	**No. 5**
Louisville, Ky.	"	**No. 6**
Stark County Jovian League (Comprising the towns of Massillon, Canton and Alliance, Ohio.)	"	**No. 7**
Tulsa, Okla.	"	**No. 8**
Eau Claire, Wis.	"	**No. 9**
Harrisburg, Pa.	"	**No. 10**
Wichita, Kan.	"	**No. 11**
Winnipeg, Man.	"	**No. 12**
Bay City, Mich.	"	**No. 13**
Milwaukee, Wis.	"	**No. 14**
Port Arthur, and Fort William, Ont.	"	**No. 15**
Oklahoma City	"	**No. 16**
Galveston, Texas	"	**No. 17**
Muskogee, Okla.	"	**No. 18**
Mansfield, Ohio (Comprising Richland and Ashland Counties)	"	**No. 19**
St. Louis	"	**No. 20**
Southwestern Michigan Jovian League (Benton Harbor, Michigan)	"	**No. 21**
Watertown (Wis.) Jovian League	"	**No. 22**
Akron (Ohio) Jovian League	"	**No. 23**
Wilmington (Del.) Jovian League	"	**No. 24**

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

The Bogey-Man Kicks

By W. R. J.

'Twas midnight, and according to
The dope of other years,
It should have been an awesome time,
Chock full of spooks and fears.
But nothing of the sort prevailed;
The city was aglow
With incandescent, spot and flood
Lights flashing high and low.

At certain angles you could see
Old Lunar overhead,
And here and there a little star
Its tiny twinkle shed.
The surface cars went buzzing by,
The autos whizzed about,
Revolving doors turned merrily
The people in and out.

I met a sorry figure slouching down
A narrow street;
He seemed to be so ill at ease
He scarce could lift his feet.
Said I, "What seems to ail you, man?"
And then I saw his face;
It was a pumpkin lighted by
A candle at its base.

"What ails me—any one may see!"
The sorry figure cried,
"I am the ancient Bogey-man,
"And have no place to hide;
"I use to frighten many folks
"At just this time of night,
"But now I have no place to work
"For this electric light!"

* * * *

No Sella Banan

By W. R. J.

My Rosa she ees sing da song
Lak ees in Etally
Mos' ev'ra night since we have been
Here in dees beeg contry.
Da ees da songs Caruso sings;
I'm betcha da ees fine—
But whatcha tink, he does not lak,
Dees leetla boy of mine!

He ees been here all of hees life,
An' goes to kinder class;
Da teacher sa' he ees so smart,
Nex' month she let heem pass.
But he won't talk Etalian,
Nor singa eet a bit.
Dat mak' my Rosa feela bad,
Because she laka eet.

She sa' to heem, "Why not you sing
Da song of Etally?"
He sa' "What ees you tink I am
"Some da' grow up to be?
"You tink I singa with da monk,
"Or holler 'nica banan'?
"Nota me, I talka U. S. A.
"An' be policaman!"

Philosophic Comments on the Scales of Judgment

CRITERION

THE STANDARD by which one human being judges the worth of another is a gauge formed from ideals made up of his own knowledge and experience. The fact that he may have neither concerning the other's line of efficiency is no impediment in the way of making the decision.

A South Sea island head-hunter forms his opinion of his fellow-man by the number and variety of his collection; the Wall Street magnate estimates by dollars rather than heads.

In the unbiased judgment of one the other wouldn't be worth a cocoanut shell, or an expired lease on a wooden nutmeg mine, according to which was doing the judging and where it was being done.

It is not at all hard to understand how environment enters into personal criterion. A fellow who has the drop on you either with an automatic or an influence over your job may not measure up to your standard, but under the influence of the surrounding atmosphere your criticism of him becomes beneficently modified.

This shows that the standards that have been chiseled or chalked upon our mentalities by previous environment are found to be flexible under the influence of the environment of the present.

For the peace and welfare of the human race we are very glad, indeed, that Bobby Burns did not get his little wish when he said:

"Oh, wad some power the giftie gie us
To see oursel's as ithers see us!"

Especially, if we could identify those who were doing the seeing, at the same time we discovered what they saw.

After the list of casualties were checked off it might bring about an improvement in the thoughts we think of each other and by that means promote felicity among those who were left to felicitate.

Taking everything into consideration, t is probably best that everyone goes ahead thinking what he pleases about other people, and keeping it to himself. The old way of improving our criterion by increasing the efficiency of our environment may not be revolutionizing our standards very rapidly, but as long as we keep plenty of good strong environments, with substantial iron bars before the windows and good high walls around them, the work of improving criterion is going to progress.

What the other fellow thinks about you is not going to hurt very much unless he goes to press with his thoughts, and what you think about him will not get you in jail if you keep your thoughts in a safe-deposit box.

* * * *

Philosophic Thoughts

If you do not like your job, try to improve it by doing it a little better. There are a lot of jobs that are undesirable because they are not developed to their full capacity.

* * * *

Did you ever notice the fellow who has the least to do kicks the hardest about doing it? A general manager of a big corporation one time said that was the way he judged where to distribute new work that developed—the fellow who did the most kicking always got more work.

* * * *

Speaking of souvenirs, how many Liberty Bonds, Red Cross Receipts and War Saving Stamps are you accumulating? They will bear a lot of patriotic dividends when people begin to talk about them after the war is over.

* * * *

We wonder if the Government is going to try to assume supervision over the Pullman porters with the railroads? If it succeeds in doing so, how can the Kaiser hope to prevail against it?

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PRACTICAL LESSONS IN ELECTRICITY

LESSON THIRTY-THREE

DIRECT-CURRENT SWITCHBOARDS

By TERRELL CROFT

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DIRECT-CURRENT switchboards are practically always of the panel self-contained type, with the exception that equalizer pedestals (Fig. 3) may be, in large installations, used in combination with them. (The statements just preceding apply to direct-current switchboards for pressures not exceeding 600 volts). Recently direct-pressures of 1200, 1500, 2400 and 3000 volts have been proposed for long distance electric railways. With these relatively high voltages remote-control switchboards of either the mechanical or electrical types may, under certain conditions, be desirable.

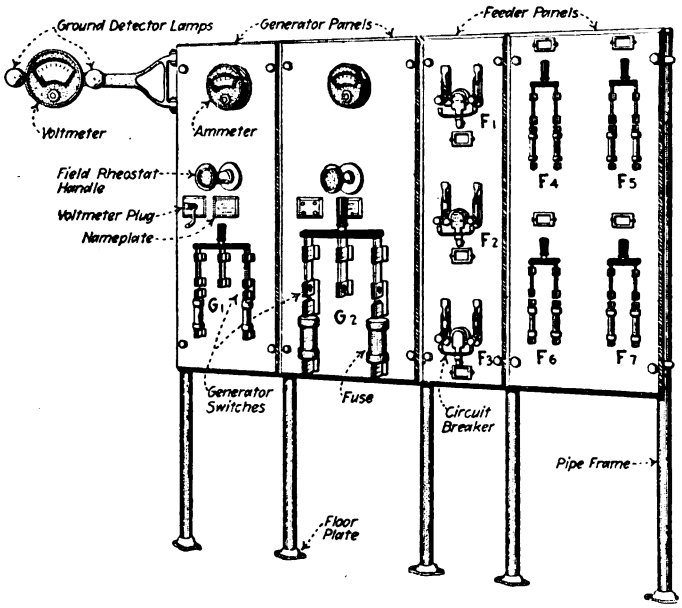


Fig. 1—Small "Standard-Unit" Switchboard for Two Compound-Wound Direct-Current Generators and Seven Feeders (General Electric Company).

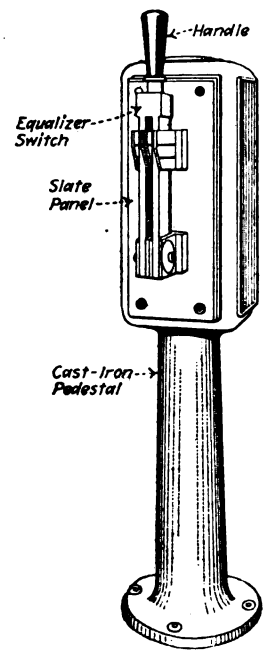
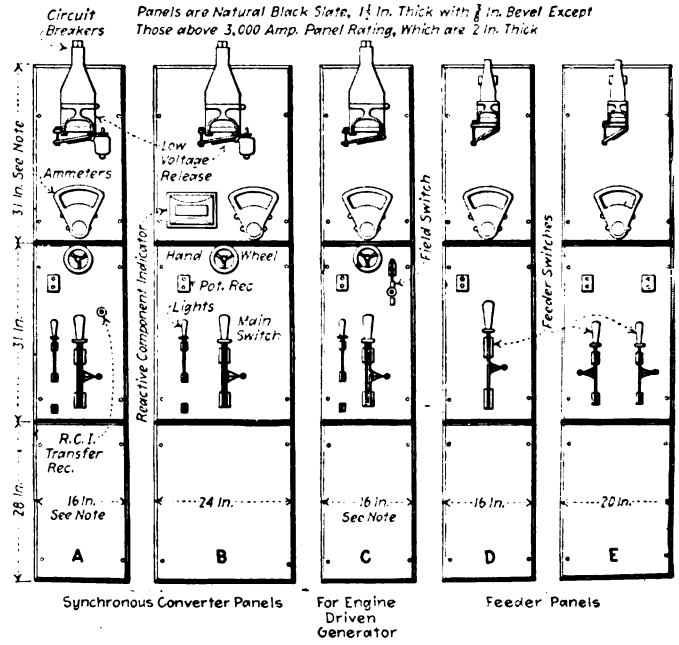


Fig. 3—Westinghouse Equalizer Pedestal with Switch for Compound-Wound Direct-Current Generator.

Direct-current switchboards for small capacity installations may be of the general single-section-panel design suggested in Fig. 1, which shows a switchboard for the control of two compound-wound generators and seven feeders. G_1 and G_2 are the generator switches. The middle blade of each of these switches is in the equalizer lead and is unfused. The feeders F_1, F_2 and F_3, for the motors, are protected by circuit-breakers. The lighting feeders, F_4, F_5, F_6, F_7, are protected by enclosed fuses.

Direct-current switchboards for installations of medium and large capacity are practically always of the three-section panel type (Fig. 11) and are 90 in. high.



Note: Panels over 4000 Amp. have Top Sections 40 In. High and for Fig. A and C are 20 In. Wide. Generator and Converter Panels 4,000 Amp. and Less for Installation in the Same Board with Larger Panels will also be Furnished with 40 In. Top Sections.

Fig. 11—Unit Switchboard Panels for 600-Volt Direct-Current Railway Service.*

*General Electric Company.

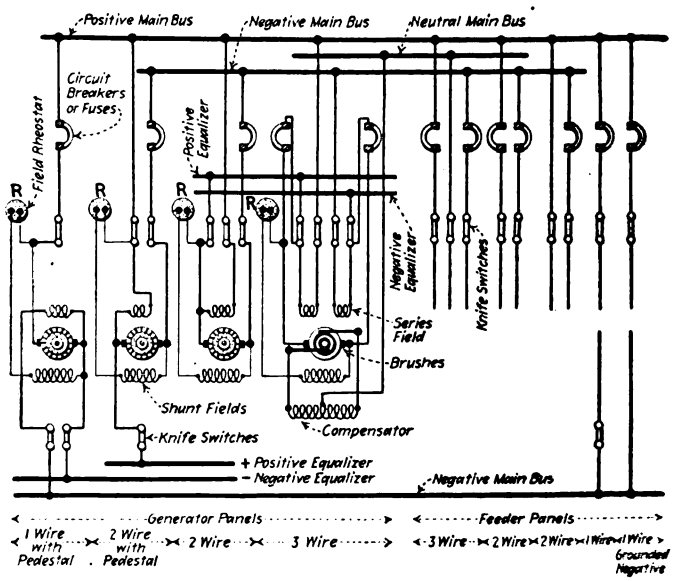


Fig. 17—Typical Low-Voltage Direct-Current Switchboard Board Connections.

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The essential circuit diagrams for direct-current switchboards are shown in Fig. 17. This indicates how two-wire and three-wire generators are connected and how one-wire, two-wire and three-wire feeders may be arranged.

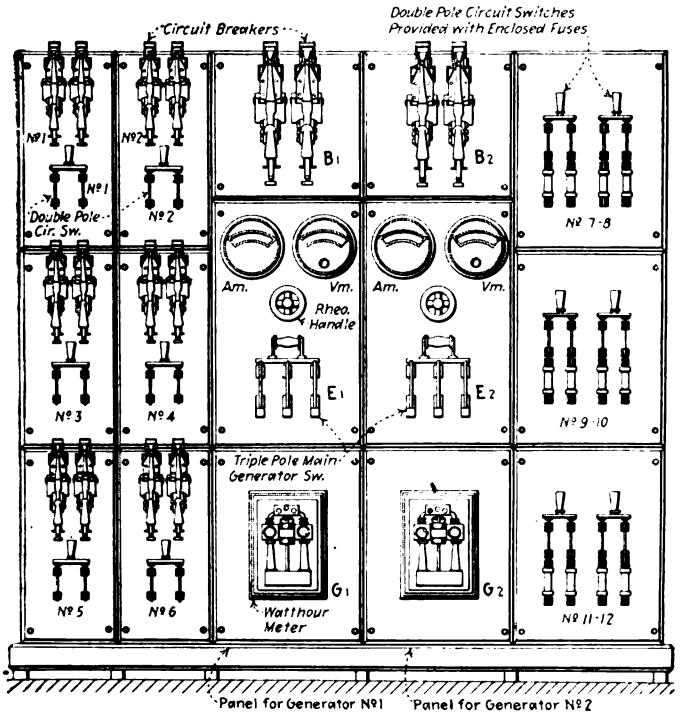

Fig. 18—Front View of the Five-Panel Direct-Current Switchboard.

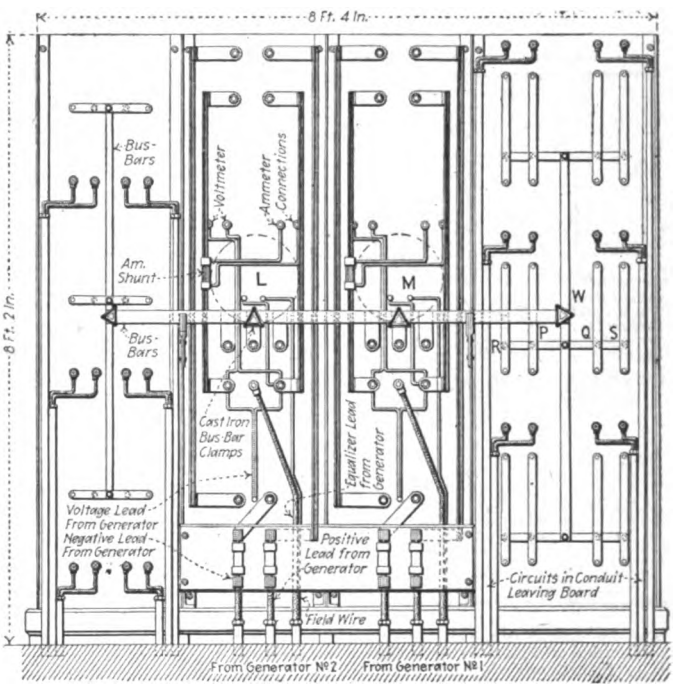

Fig. 20—Rear Elevation of the Five-Panel Direct-Current Switchboard.

A moderate-capacity, two-wire, direct-current switchboard is shown in Figs. 18, 19 and 20. These illustrations* show the general construction of a unit-section, direct-current switchboard for a medium-capacity, isolated plant installation operating at a pressure of 110 volts. Fig. 21 shows the connection diagram. Each lighting feeder is controlled by a double-pole knife switch protected with enclosed fuses. Each motor feeder is controlled and protected by a double-pole automatic circuit-breaker. Each of the two generators has its own panel and is protected by a double-pole circuit-breaker, B_1 and B_2. In a moderate-capacity installation such as this the equalizer lead from each generator is carried to the switchboard and connected to the center blade, E_1 and E_2 (Fig. 19), of the main switch.

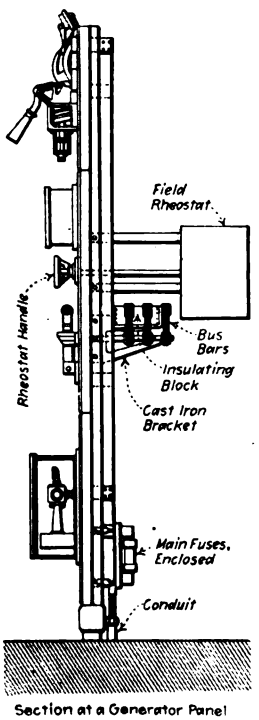

Fig. 19—Vertical Section Taken Just to the Right of One of the Generator Panels.

*Roland, APPLIED ELECTRICITY FOR PRACTICAL MEN, page 100.

Large-capacity two-wire direct-current switchboards are usually arranged so that an isolated equalizer pedestal (Fig. 3) may be used for economic reasons above outlined. Fig. 22 diagrams typical connections for a generator panel of this type. The generator panel itself is illustrated in Fig. 23. The feeder panels are usually constructed about as shown in Fig. 24.

Three-wire direct-current switchboards resemble, in general external appearance, those for two-wire circuits. The connections, however, are materially different in certain details, as disclosed by Fig. 25. This delineates the circuit arrangement for a switchboard serving two three-wire 110-220-volt direct-current generators and three feeders, one of the feeders being 220-volt two-wire.

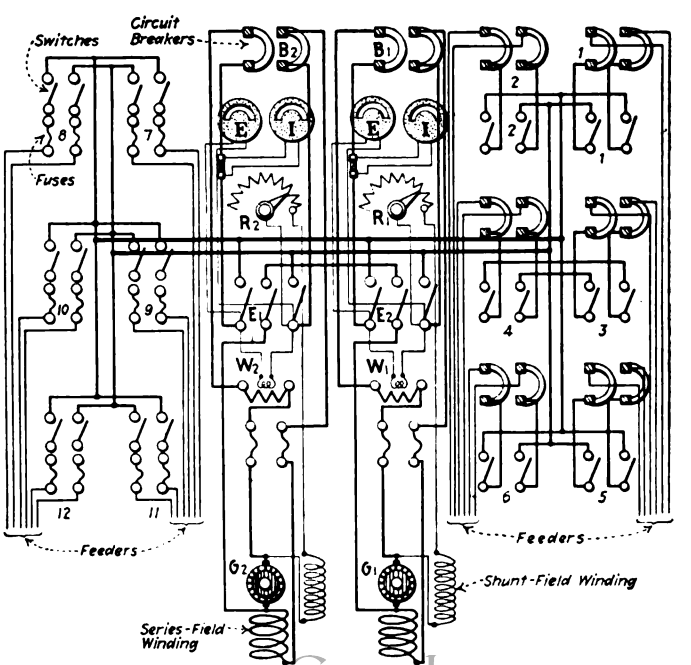

Fig. 21—Wiring Diagram for the Five-Panel Direct-Current Switchboard.

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Switchboards for 600-volt direct-current railway service are really two-wire switchboards, but due to the fact that a ground return is almost always used for railway circuits, certain variations from the standard two-wire construction is necessary. Only one side of the circuit, usually the positive, is carried to the switchboard as illustrated in Fig. 26. Both the equalizer switch and the negative switch, if such is used, may be mounted on a pedestal, P_1 and P_2 (see Fig. 3 for detail) located near the machine. The negative side of the line is carried to a ground connection near the pedestal. Hence, in effect, the earth itself constitutes the negative bus. By utilizing this *"single bus" design* material economies in first cost are realized. Both the generator and feeder panels (Fig. 11) can then be made narrower because only a single-pole switch is necessary on the panels. This tends to reduce the cost of the switchboard. A further economy results from the fact that with the single-bus arrangement it is not necessary to route the heavy negative and equalizer conductors to the switchboard.

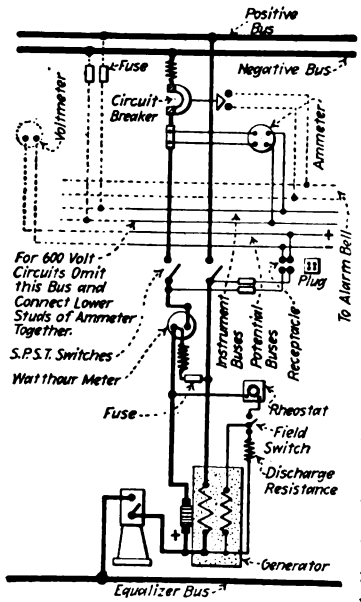

Fig. 22—Low-Voltage Direct-Current Generator Panel Wiring Where Equalizer Pedestal is Used. (Back View.)

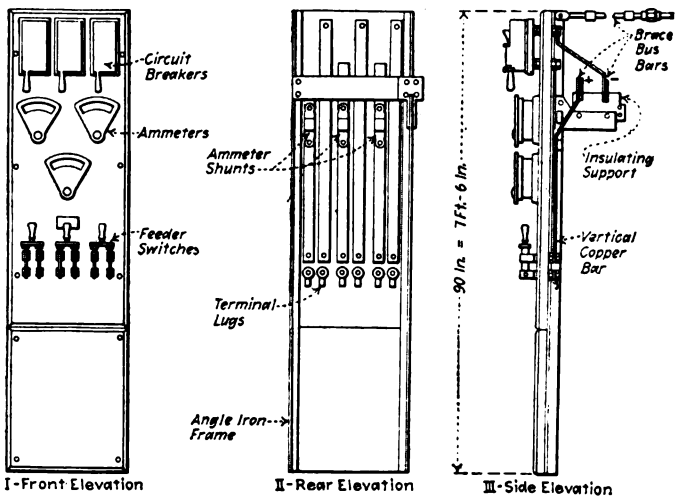

Fig. 24—Typical Direct-Current Feeder Panel in an Installation of Considerable Capacity.

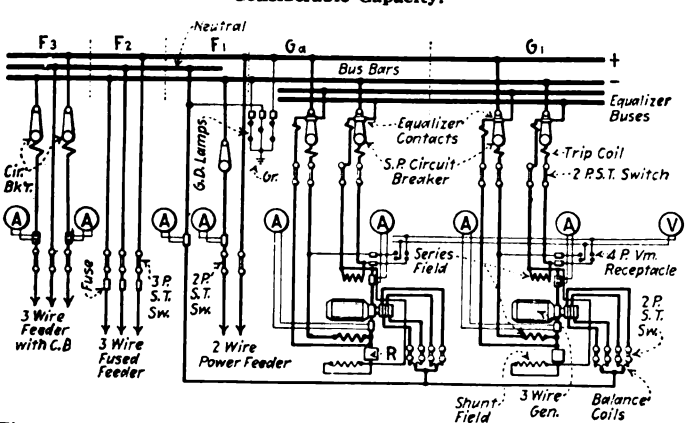

Fig. 25—Wiring Diagram for a Three-Wire Direct-Current Switchboard Serving Two Generators and Three Feeders.

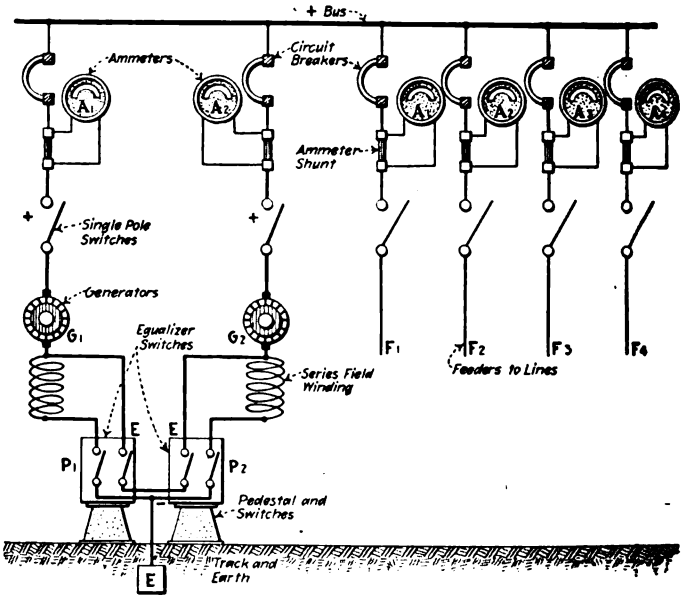

Fig. 26—Typical Connection Diagram for a 600-Volt Direct-Current Railway Switchboard.

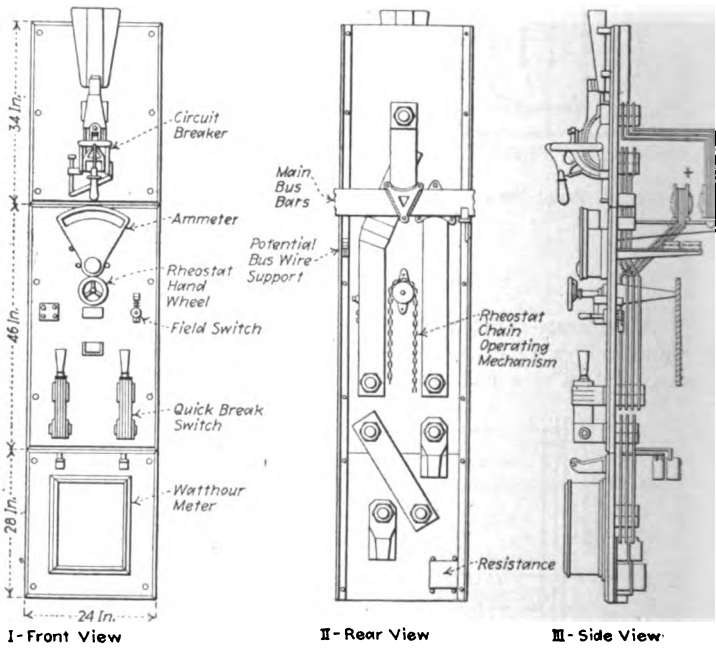

Fig. 23—Low-Voltage Direct-Current Two-Wire Generator Panel of Large Capacity.

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Bookkeepers	3	26–31	High School	5–14 yrs.	$65–100	Anywhere.
Central Station Engineers	5	29–45	H. S.-Univ.	6–18 yrs.	$60–200	Anywhere.
Clerical	7	22–47	High School	2–10 yrs.	$65–125	Anywhere.
Commercial Laboratory Workers	1	29	Tech. School	11 yrs.	.....	Anywhere.
Construction Engineers	8	21–39	H. S.-Univ.	4–20 yrs.	$50–200	Anywhere.
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Electricians	4	20–35	H. S.-Univ.	3–12 yrs.	$60–100	Anywhere.
Electrical Engineers	17	22–45	Practical-Univ.	5–20 yrs.	$65–300	Anywhere.
Engineers	10	23–31	Practical-Univ.	5–12 yrs.	$120–160	Anywhere.
Estimators	2	34–35	Practical	9–18 yrs.	$125–160	Anywhere.
Fixture Men	2	26–28	Practical	10 yrs.	$140	Anywhere.
Foremen	4	27–31	Practical	7–14 yrs.	$125–160	Anywhere.
General Managers	5	30–34	Practical	7–15 yrs.	$250–417	Anywhere.
Illuminating Engineers	2	26–31	Univ	5–7 yrs.	$100–200	Anywhere.
Linemen	3	24–28	High School	4–9 yrs.	$90	Anywhere.
Maintenance Men	1	26	High School	6 yrs.	.....	Anywhere.
Managers, Commercial Department	1	43	Practical	12 yrs.	$200	Anywhere.
Managers, Contracting	1	26	College	5 yrs.	$125	Anywhere.
Managers, Jobbing House	2	32	College	13 yrs.	$2,400-10,000	Anywhere.
Managers, Office	3	26–32	High School	10 yrs.	$200	Anywhere.
Managers, Plant	21	25–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere.
Managers, Store	1	29	Univ.	10 yrs.	$125	West.
Managers, Railway	1	39	Practical	4 yrs.	$200	Anywhere.
Managers, Traffic	1	37	Practical	15 yrs.	$200	Anywhere.
Manufacturers Representatives	13	30–46	Practical-Tech.	9–20 yrs.	Com.–$300	Anywhere.
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Meter Testers	2	28–34	Grade-College	8–16 yrs.	$100	Anywhere.
New Business Managers	4	29–34	H. S.-Univ.	9–15 yrs.	$100–200	Anywhere.
Office Executives	10	25–40	Grade-Univ.	4–18 yrs.	$80–200	Anywhere.
Power Salesmen	2	25–36	Tech. Grad	5–12 yrs.	$90–200	Anywhere.
Purchasing Agent	10	24–41	Grade-Tech	4–21 yrs.	$80–200	Anywhere.
Sales Engineers	9	25–41	College-Univ.	4–11 yrs.	$100–200	Anywhere.
Sales Managers	12	28–45	H. S.-Univ.	4–17 yrs.	$150–417	Anywhere.
Salesmen	74	22–55	H. S.-Univ.	2–25 yrs.	$75–200	Anywhere.
Store Keepers	1	33	Practical	10 yrs.	$150	Anywhere.
Superintendents	25	26–46	H. S.-Univ.	3–15 yrs.	$100–500	Anywhere.
Supervisors Lighting	1	25	Technical	7 yrs.	$100	East.
Telephone Engineers	2	24–28	H. S.-Tech.	5–7 yrs.	.....	Anywhere.
Testing Engineers	1	24	Technical	2 yrs.	$100	Anywhere.
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137. Armature Winder. New York firm will pay $24 for 48-hour week, with excellent chances for advancement, for men familiar with winding and repairs on A. C. and D. C. motors and dynamos.

140. Electricians. Kansas City contracting concern is in need of several men.

141. Salesmen. Hustler wanted to sell electrical and auto supplies in Southern Illinois, Western Kentucky and Tennessee.

142. Salesmen. Chicago house can use several men to sell Brascolites on commission.

143. Salesmen. Good opening for man familiar with sale of appliances, window trimmings, to estimate wiring and fixture job.

146. Draftsman. Capable man wanted by large eastern electrical manufacturer.

147. Maintenance Man. Opening ready with Philadelphia electrical house.

148. Central Station Engineers. Salary and board offered by pleasure resort for man who is also a fair mechanic.

149. Clerical-Purchasing. Combination opening with Philadelphia electrical house.

150. Salesmen-Sales Engineers. Men with E. E. training and several years practical mechanical experience are needed by middle-west electrical manufacturer.

151. Salesmen. Public service concern is looking for men; central station experience desirable but not necessary.

152. Salesmen. Experienced men wanted by large jobbing concern.

153. Sales Office Assistant. An opening for energetic young man; chance for salesman opening later; electrical experience or education necessary.

154. Industrial Plant Machinery Salesman. Attractive proposition in Oklahoma for ambitious young man who has had some experience in this line.

159. Auditor—Accountant. Opportunity with a small combination railway and light property.

160. Salesmen. Three men, familiar with electrical supplies and machinery, needed by Philadelphia concern.

161. Sales Engineer. Chicago concern can use one or more capable men.

163. Bookkeeper. Ohio contracting house has a place for a fellow Jovian.

164. Salesmen. New England concern wants men for western Massachusetts, Maine and eastern Massachusetts territory; commission basis. Will consider only men capable of earning $75 to $100 per week.

165. Lighting Fixture Salesmen. Man capable of handling big business can find good opening with Omaha concern.

166. Salesmen—Tool Steel. New York tool steel manufacturer needs experienced men to cover Ohio, Pennsylvania, Texas and Florida.

167. Salesman. An eastern metal alloy house will open a branch in Detroit, and can use a high class man, familiar with electrical products.

168. Salesman. Chicago jobbing and wire house has opening for capable electrical salesman.

169. Operating Engineer. $110.00 and board to install refrigerating machinery.

170. Draftsman-Salesman. Chicago electrical supply house can use a combination man familiar with switch and panel boards.

172. Electrician. $90 to $120 offered by a northern manufacturing concern for all-around shop man, familiar with A. C. and D. C. windings.

173. Salesman. Indiana territory; to sell storage batteries to garages and dealers. Electrical engineering knowledge desirable. Permanent position, if satisfactory.

174. Armature Winders—Repair Men. Kansas City engineering concern wants competent men in machine repair department.

175. Central Station Engineers. $80 to $100 for 12-hour night shift, by northern public utility concern.

176. Bookkeepers. Two men wanted for western plants; experience in light or railway offices necessary.

177. Salesmen. New York electrical house, handling heavy supplies, wants men capable of developing large earning capacity, for Philadelphia, Washington, Boston and New York.

179. Manager—Storekeeper. Man for each position wanted by New York, large supply house.

180. General Office Man. Opening with New York lamp manufacturer, for man who can develop into salesman or better.

181. Sales Clerk. $75 to start in supply division of large electrical manufacturing concern.

182. City Salesman. Man wanted by Detroit firm. Must understand general electrical supplies.

183. Draftsmen. Massachusetts opening with large electrical manufacturer.

184. Sign Salesman. Generous offer to man able to get results.

185. Sales Representative. Attractive New England opening for first-class man who can develop territory.

186. Draftsman. A1 opportunity for man able to take charge of department of an engineering school.

187. Salesman. Central Iowa wholesale electrical supply house has attractive proposition for capable man.

188. Stock Clerk. Ambitious young man with electrical experience can place himself to advantage with Iowa supply house.

189. Electrical Engineers
Purchasing Agents
Sales Engineers
Sales Managers
Government places open for capable men over thirty years of age. Further particulars on request.

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(*L. W. Brown, Po. 16319, Second Tribune.)
(Guy G. Crane, Po. 13059, Second Tribune).....Lansing
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St.....Traverse City
MCCLOY, A. S., Po. 11051, First Tribune, care Stevenson Hotel.....Detroit
(J. T. Pearson, Po. 11210, Second Tribune)
*MARBLE, CHARLES M., Po. 13961, First Tribune, 67 College St.....Battle Creek
(*L. R. Greusel, Po. 10918, Second Tribune)
SCHAGANE, P. F., Po. 13871, First Tribune, 617 South Saginaw St.....Flint
(L. G. Copeman, Po. 7219, Second Tribune)
*THORNE, JOHN J., Po. 14749, First Tribune, care Throne Electric Co.....Bay City
(*Samuel Ball, Po. 19542, Second Tribune.)
*TROMBLEY, GEORGE, Po. 14750, First Tribune, care Trombley Electric Co., 130 N. Jefferson St.....Saginaw
(*A. B. Brow, Po. 14737, Second Tribune, 228 South Weadock Ave).....Saginaw
WATSON, GEO. H., Po. 12848, First Tribune, care Consumers Power Co., 124 Monroe St.....Grand Rapids
(R. H. Vandermass, Po. 16484, Second Tribune)

MINNESOTA

*ANDERSON, EMIL, Po. 7805, First Tribune, 239 Plymouth Building....Minneapolis
(*Paul Joyslin, Po. 1254, Second Tribune.)
*GRIMES, W. A., Po. 761, First Tribune, care Northern Electric Co.....Duluth
(*F. A. Johnson, Po. 8192, Second Tribune)

MISSISSIPPI

*BRANDLI, H. E., Po. 15617, First Tribune, care Meridian Light & Power Co.Meridian
(*Chas. M. Rogers, Po. 14485, Second Tribune)
GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co.....Gulfport
*MCANGE, W. N., Po. 16854, First Tribune, care Southern Telephone & Telegraph Co., Telephone Building.....Corinth
NEWBILL, HOMER J., Po. 16855, First Tribune, Box 413.....Tupelo

MISSOURI

*BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co.....Marshall
(G. E. Michel, Po. 9061, Second Tribune).....St. Louis
FOX, CHAS. D., Po. 18163V, First Tribune, care City Light Plant.....St. Joseph
(S. W. Beale, Po. 6840, Second Tribune)
*FUNSTEN, F. L., Po. 3043, First Tribune, 1113 Wyandotte St.....Kansas City
(*A. D. Barber, Po. 1850, Second Tribune.)
(A. M. Grall, Po. 4112, Second Tribune).....Joplin
*NIENHAUS, J. V., Po. 19219, First Tribune, care Perry County Public Utilities Co.....Perryville
*WALKER, A. H., Po. 17669, First Tribune, care Walker-O'Byrne Electric Co.....Springfield
(*Arthur Prager, Po. 16105, Second Tribune)

NEBRASKA

BURLEY, W. B., Po. 10291, First Tribune, 318½ West Koenig St.....Grand Island
(J. D. Whitmore, Po. 1409, Second Tribune)

NEW JERSEY

ALEXANDER, JOHN P., Po. 11892, First Tribune, Broad St. Bank Bldg....Trenton
COLLISON, GEORGE L., Po. 17040, First Tribune (for Passaic County), 188 Ellison St.....Paterson
COX, W. A., Po. 18960, First Tribune, care Public Service Electric Co...Newark
(J. N. Adam, Po. 18975, Second Tribune)
FEY, W. E., Po. 10120, First Tribune, care Diehl Manufacturing Co..Elizabeth
*PURINTON, A. J., Po. 9643V, First Tribune, care Atlantic City & Shore Ry. Co.....Atlantic City
(*Wm. Bach, Po. 14191, Second Tribune)
STORTZ, H. W., Po. 16450, First Tribune, care Edison Storage Battery Co..Orange
(J. B. Renwick, Po. 16445, Second Tribune)

NEW MEXICO

*HICKS, A. C., Po. 17978, First Tribune, care Albuquerque Gas & Electric Co.....Albuquerque
*ROBERTS, E. A., Po. 17980, First Tribune, care Public Utilities Co.....Carlsbad
SMITH, JAMES R., Po. 16107, First Tribune, care Raton Electric Light & Power Co.....Raton

NEW YORK

(C. C. MacKenzie, Po. 2029, Second Tribune).....Syracuse
BURNS, JOHN H., Po. 870, First Tribune, care McCarthy Bros. & Ford, 41 Eagle St.....Buffalo
(L. F. Philo, Po. 774, Second Tribune)
*PELZ, GEO. V. W., Po. 18674, First Tribune, care New York Edison Co., 109 West 125th St.....New York
(J. Lloyd Prince, Po. 4263, Second Tribune)
*RUSSELL, R. E., Po. 5561, First Tribune, care General Electric Co....Schenectady

NORTH CAROLINA

JONES, WM. T., Po. 5685, First Tribune, P. O. Box 405.....Fayetteville
SPEAKE, CHAS. L., Po. 16993, First Tribune, care Westinghouse Electric & Manufacturing Co.....Charlotte
*SPENCER, G. L., Po. 11366, First Tribune, 713 Chestnut St.....Greensboro
(*R. H. Milton, Po. 11371, Second Tribune)

OHIO

BRAUN, W. A., Po. 14652, First Tribune, care Braun Electric Manufacturing Co.....Dover
(W. P. Holcombe, Po. 901V, Second Tribune)
*BULKELEY, W. V. C., Po. 17998, First Tribune, care Columbus Railway, Power & Light Co.....Columbus
*COCHRAN, J. E., Po. 15898, First Tribune, care Ohio Electric Co.....Lima
*COONEY, JAS. J., Po. 13184, First Tribune, care Toledo Railway & Light Co.Toledo
(*Alonzo W. Roush, Po. 12410, Second Tribune)
CRAIN, CHARLES E., Po. 6946, First Tribune, care Crain-Stuart Co.....Springfield
(Fred J. Green, Po. 6951, Second Tribune)
*FENTON, E. BURT, Po. 18446, First Tribune, care Northern Ohio Traction & Light Co.....Akron
HALL, CHAS. S., Po. 12345, First Tribune, care Wm. Hall Electric Co., 916 Oliver St.....Dayton
(F. B. Steele, Po. 13451, Second Tribune)
HENCH, L. W., Po. 7854, First Tribune, care Westinghouse Electric & Manufacturing Co.....Youngstown
(E. A. Sanders, Po. 9666, Second Tribune)
HURD, WILLIAM P., Po. 9798, First Tribune, care Northwestern Ohio Light Company.....Van Wert
*LEMEN, L. J., Po. 13195, First Tribune, care Massillon Electric & Gas Co..Massillon
(*Samuel E. Ringgold, Po. 10995, Second Tribune.)
LOEWE, P. M., Po. 3942, First Tribune, care Oberlin Gas & Electric Co..Oberlin
MILLER, E. G., Po. 13108, First Tribune, care Warren & Niles Telephone Co..Warren
(Marshall, W. J., Po. 10001, Second Tribune.)
MOYER, HAROLD, L., Po. 14386, First Tribune, 43 South New York St....Kenmore
PARKER, HERBERT L., Po. 905, First Tribune, care Conneaut Metal Works Co.....Conneaut
*ROHRBAUGH, C. L., Po. 18450, First Tribune, 1211 Carr St.....Sandusky
(*R. C. Beebe, Po. 18442, Second Tribune.)
(J. D. Witner, Po. 14412, Second Tribune)
SIMS, E. A., Po. 5968V, First Tribune, care Avery-Loeb Electric Co.....Newark
(F. C. Morrison, Po. 18630, Second Tribune)
SMITH, E. B., Po. 10596, First Tribune, care Coshocton Gas Co.....Coshocton
*SNYDER, ED., Po. 19753, First Tribune, care Ohio Brass Company.....Mansfield
(*H. S. Robeson, Po. 13200, Second Tribune).
*VAN WINKLE, FRANK D., Po. 12966, First Tribune, care Post Glover Co..Cincinnati
(*L. E. Trotter, Po. 3510, Second Tribune.)
(Paul B. Zimmerman, Po. 7305V, Second Tribune).....Cleveland

OKLAHOMA

*CORKEN, O. K., Po. 19827, First Tribune, 213 W. First St.....Oklahoma City
(*A. L. Mullengren, Po. 18853, Second Tribune.)
HOWELL, EDWARD, Po. 7896, First Tribune, care Abernathy & Howell, Elks Building.....Shawnee
*RENTCHLER, C. E., Po. 6870, First Tribune, care Enid Electric & Gas Company..Enid
(*Lincoln Beerbower, Po. 1475, Second Tribune.)
*STRASSWEG, FRED A., Po. 19821, First Tribune, care Muskogee Gas & Electric Co.....Muskogee
(*Edgar M. Graham, Po. 19811, Second Tribune)
*WALKER, P. G., Po. 6871, First Tribune, care Tulsa Corporation.....Tulsa
(James M. Kinslow, Po. 16770, Second Tribune.)

PENNSYLVANIA

*FADER, W. L., Po. 2883, First Tribune, care Union Electric Co.....Pittsburgh
(*D. Paul Lockard, Po. 5788, Second Tribune.)
FERREE, L. L., Po. 18865, First Tribune, 1830 Regina St.....Harrisburg
(T. F. R. Peyton, Po. 12438, Second Tribune.).....Erie
*GROVES, FRANK P., Po. 3351, First Tribune, 112 S. 16th St.....Philadelphia
KRISE, W. M., Po. 4823, First Tribune, Manager, Jefferson Electric Co Punxsutawney
LODGE, JOS., Po. 18869, First Tribune, 157 East Chestnut St.....Lancaster
MURPHY, WALTER R., Po. 14021, First Tribune, care Meadville Telephone Co.....Meadville
(Carl W. Wilks, Po. 10848, Second Tribune)
(W. T. Snyder, Po. 5128, Second Tribune).....McKeesport
REGER, THOMAS E., Po. 4637, First Tribune, 224 Seventh Ave.....Altoona
*ROUNDS, L. B., Po. 14528, First Tribune, care New Castle Electric Co., 19 Washington St.....New Castle
(*J. C. Chestnut, Po. 14873, Second Tribune)

SOUTH CAROLINA

DOUGLAS, JAS. A., Po. 16984, First Tribune, care Municipal Electric Plant Lake City
(T. A. Brookbanks, Po. 16460, Second Tribune).....Charleston

TENNESSEE

ALLEN, TERRY E., Po., 18838, First Tribune P. O. Box 185.....Jackson
*JONES, GRAYSON, Po. 13782, First Tribune, care Electric Equipment Co., 131 Eighth Ave., North.....Nashville
RUTLEDGE, C. B., Po 2127, First Tribune, care Bluff City Electric Co...Memphis
(B. F. Myers, Po. 12911, Second Tribune)

TEXAS

*IRVINE, R. J., Po. 6251, First Tribune, care San Angelo Water Light & Power Co.....San Angelo
*COOPER, H. S., Po. 365, First Tribune, care Southwest Gas & Electric Co., 405 Slaughter Building.....Dallas
COPLEY, E. F., Po. 7073, First Tribune, care Central Electric Co.....Waco
(L. B. Gardner, Po. 11390, Second Tribune)
*FROST, F. G., Po. 4015V, First Tribune, care Houston Lt. & Pr. Co.....Houston
*KELSEY, L. M., Po. 11350, First Tribune, care S. W. Tel. & Tel. Co....Galveston
(*Robt. A. Wood, Po. 11038, Second Tribune)
LARABEE, R. W., Po. 1327, First Tribune, care Southwestern Electric & Machine Co.....El Paso
MONTGOMERY, JOHN G., Po. 11355, First Tribune.....La Marque
MUNROE, WALTER N., Po. 3085, First Tribune, care Texas Power & Light Co.....Paris
REID, BRUCE, Po. 18290, First Tribune, care Gulf Refining Co.....Port Arthur
(Edward T. Keck, Po. 18284, Second Tribune)
*SCOVILL, F. E., Po. 17, First Tribune, care San Antonio Builders Exch. San Antonio
(*C. G. Matthews, Po. 10662, Second Tribune)
SMITH, GEO. B., Po. 6649, First Tribune, 309 Guadalupe St.....San Marcos — Central Texas League — (Lockhart, Luling, Seguin, New Braunfels, San Marcos)
WHITE, FRANK A., Po. 2216, First Tribune, care West Texas Electric Co..Sweetwater
WRIGHT, J. A., Po. 2242, First Tribune, care Nunn Electric Co.....Amarillo

UTAH

ACHERMAN, R., Po. 2909, First Tribune, 209 Kearns Building.....Salt Lake City
WOLF, H. M., Po. 12774, First Tribune, President, Cache Valley Electric Co..Logan

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VIRGINIA

GOODLOE, H. B., Po. 11169, First Tribune, 116 First National Bank Bldg..Roanoke
*MACLEARY, H. M., Po. 9725, First Tribune, 707 Washington St.....Suffolk
(*J. E. B. Holliday, Po. 17106, Second Tribune)
MARCHMONT, G. T., Po. 14497, First Tribune, care Western Electric Co..Richmond
*PATRICK, W. A., Po. 19859, First Tribune, care Dupont-DeNemours & Co. Hopewell
(*G. C. Hurst, Po. 8931, Second Tribune)
WOODHOUSE, H. C., Po. 6618, First Tribune, 54 Bank St.....Norfolk

WASHINGTON

HAROLD, W. H., Po. 840, First Tribune, Box 455.....Walla Walla
(H. B. Pierce, Po. 7235, Second Tribune).....Spokane

WEST VIRGINIA

COSTINE, THOS. E., Po. 7699, First Tribune, 1059 McColloch St.....Wheeling
(R. R. Fagin, Po. 9161, Second Tribune)
*WALKER, C. D., Po. 18092, First Tribune, care C. & W. Electric Co.....Huntington

WISCONSIN

*BRIGGS, WILFRED, Po. 12382, First Tribune, 18 Portland St.....Fond du Lac
(*John Adams, Po. 12378, Second Tribune)
DEARTH, E. C., Po. 17144V, First Tribune, care Wisconsin & Minnesota Light & Power Co.....Eau Claire
(Holmes Ives, Po. 18253, Second Tribune)
*DUNHAM, A. W., Po. 7352, First Tribune, care Sun Ray Manufacturing Co..Oshkosh
*ENGSBERG, B. C., Po. 15985, First Tribune, care Light and Water Dept..Lake Mills
*PFEIFER, JOSEPH W., Po. 10981, First Tribune, care Henry Newgard & Company.....Milwaukee
(*W. R. Patton, Po. 1090, Second Tribune.)
LINKER, P. R., Po. 14302, First Tribune, care Wisconsin-Minnesota Light & Power Co.....La Crosse
(Dan. Whalen, Po. 16022, Second Tribune)
TESSIER, LEONARD, L., Po. 18823, care De Pere Electric Light & Power Co..De Pere
ROBERTS, ELMER D., Po. 10997, First Tribune, 308 Sixth St.....Racine
*SCHEURMANN, A. R., Po. 17653, First Tribune, 8 Main St.....Watertown
(*Walter O. Wickler, Po. 20000, Second Tribune)

CANADA

ALBERTA

(David Conn, Po. 11885, Second Tribune).....Lethbridge

MANITOBA

*HENRY, J. S., Po. 5994, First Tribune, 152 Gary St.....Winnipeg
(*G. J. Brown, Po. 5977, Second Tribune)

ONTARIO

(C. B. Deeks, Po. 17101, Second Tribune).....Coniston
*COOKE, W. P., Po. 16714, First Tribune, P. O. Box 178.....Port Arthur

SASKATCHEWAN

SANGSTER, A. G., Po. 7496, First Tribune, 820 Fourteenth St., East...Saskatoon

SPAIN

EDDY, H. W., Po. 11105, First Tribune, care Riegos y Fuerza del Ebro S. A. Apartado 491.....Barcelona

* * * *

JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, V. W. Shear, Po. 14399, 609 Flatiron Building.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, R. J. Hadlow, Po. 15530, care Electric Service Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, Edmond D. McCarthy, Po. 589-10, 41 East Eagle Street.

CHATTANOOGA—Wednesday, 12:00 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge, 1900 Continental & Commercial Bank Building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, Joseph C. Bowman, Po. 6275, care H. W. Johns-Manville Company.

CLEVELAND—Regular meeting, Thursday, 12:00 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12:00 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Railway, Power & Light Company.

DALLAS—First and third Mondays, Hotel Adolphus, 12:15 p. m. Secretary, E. E. Roessler, Po. 12128, P. O. Box 1506.

DAYTON—First and third Mondays of each month, 12:00 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Company.

DENVER—Wednesday, 12:15 p. m., Kaiserdorf Hotel. Secretary, R. Arnold Lewis, Po. 11514, care Edins Lamp Works.

DETROIT—Meetings Saturday, 12:30 p. m., Grill Room, Board of Trade. Secretary, R. J. Kirchner, Po. 5199, care General Electric Company.

EAU CLAIRE—First Monday each month. Secretary, E. C. Dearth, Po. 17144V, care Wis. & Minn. Light & Power Co.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna Street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur Hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Company.

GALVESTON—Meet on call. Secretary, Howard Jolly, Po. 16826, care Postal Telegraph Company.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Company.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Company.

INDIANAPOLIS—Monday, 12:15 p. m. Secretary, A. H. Smith, Po. 13580, care Ford Motor Car Company, 1315 East Washington Street.

KANSAS CITY—Third Friday each month, 12:15 p. m., Hotel Muehlebach. Secretary, T. R. Harber, Po. 18908, 1500 Grand Avenue.

LA CROSSE—First Thursday each month, Elks Club, 6:00 p. m. Secretary, Dan J. Whalen, Po. 16022, care Thill-Manning-Whalen Company.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Company.

LOS ANGELES—Wednesday, 12:00 m., Jahnke's Tavern, 534 South Spring Street. Secretary, Clifton Peters, Po. 12734, 108 Edison Building.

LOUISVILLE—Tuesday, 12:15 p. m., Hotel Henry Watterson. Secretary, C. C. Dicken, Po. 16660, care Louisville Gas & Electric Company.

MANSFIELD—Date and place of meeting from Secretary, H. A. Waite, Po. 16625, care Federal Sign System.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel. Secretary, W. R. Murphy, Po. 14021, care Meadville Telephone Company.

MILWAUKEE—Second Tuesday each month, Hotel Plankington. Secretary, F. V. Ziekursch, Po. 16625, 436 Public Service Building.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second Avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

MUSKOGEE—Secretary, A. E. Farmer, Po. 19809, 544 N. 11th St.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Company.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne Street, New Orleans, La.

NEW YORK—First Wednesday each month, 12:30 p. m., Stewart's Restaurant, Park Place. Secretary, F. M. Feiker, Po. 17197, care Electrical World, Tenth Avenue and Thirty-sixth Street.

OKLAHOMA CITY—Monday, 12:15 p. m., Lee Huckins Hotel. Secretary, A. L. Mullergren, Po. 18853, care Berham Engineering Company.

PEORIA—First and third Saturdays of each month, 1:00 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Company.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon Street.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, R. Gray Jones, Po. 16094, care Cutter-Hammer Co.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's Restaurant, Kellog Street. Secretary, J. O. Roser, Po. 10412, care General Electric Company.

RICHMOND—Third Wednesday of each month, Business Men's Club. Secretary, L. E. Walker, Po. 6610, care Western Electric Company.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Company.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto Avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Company.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Ridpath, Po. 7739, 505 Rialto Building.

SPOKANE—First and third Wednesdays of each month, 12:00 m., Davenport's Hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Company.

STARK COUNTY—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

ST. LOUIS—Tuesday, 12:15 p. m., American Annex Hotel. Secretary, Geo. McD. Johns, Po. 9052, Room 401, City Hall.

ST. JOSEPH, MO.—Secretary, W. R. Thomas, Po. 1489, care American Electric Company.

TULSA, OKLA.—Monday, 12:00 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G. Walker, Po. 6871, 18 West Third Street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Company.

WATERTOWN, WIS.—(Date and place later) Secretary, H. F. Henke, Po. 20006, care Wis. Gas & Electric Co.

WICHITA—First and third Mondays of each month, 12:00 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Company.

WINNIPEG—Every other Thursday, 12:15 p. m., Fort Garry Hotel. Secretary, C. T. Kummen, Po. 15957, 386 Donald Street.

Coming Rejuvenations

(At date of going to press; many others in prospect)

January—Watertown, Wis. First Tribune, A. R. Scheurmann, Po. 17653, 8 Main Street.

January—Massillon, Ohio. First Tribune, L. J. Lemen, Po. 13195, care Massillon Electric & Gas Company.

January—Winnipeg, Man. First Tribune, J. S. Henry, Po. 5994, 152 Gary Street.

January—Oklahoma City. First Tribune, O. K. Corken, Po. 19827, 213 West First Street.

January—Muskogee, Okla. First Tribune, F. A. Strassweg, Po. 19821, care Muskogee Gas & Electric Company.

January—Mansfield, Ohio. First Tribune, Ed. Snyder, Po. 19753, care Coshocton Gas Company.

January—New York, N. Y. First Tribune, Geo. V. W. Pelz, Po. 18674, care Morningside Branch, New York Telephone Company.

January—Oskosh, Wis. First Tribune, A. W. Durham, Po. 7352, care Sun Ray Manufacturing Company.

January—Lake Charles, La. Firs Tribune, L. A. Swan, Po. 2730-200, care Lake Charles Railway & Light Company.

January—Galveston, Tex. First Tribune, L. M. Kelsey, Po. 11350, care Southwestern Telegraph & Telephone Company.

January—Akron, Ohio. First Tribune, E. Burt Fenton, Po. 18446, care Northern Ohio Traction & Light Company.

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JOVIAN HOTELS

HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their **current membership cards at the time of settlement. Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage.** Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

	Minimum Without Bath	Minimum With Bath
Asheville, N. C.—Langren	.....	.....
Baltimore, Md.—Emerson	$2.00	$2.50
Boise, Ida.—Idanha	$1.00	$1.50
Boston, Mass.—Brunswick	.....	.....
Charlotte, N. C.—Buford	$1.00	$1.50
Chattanooga, Tenn.—Theresa	.....	.....
Colorado Springs, Colo.—Acacia	.....	.....
Columbia, S. C.—Colonial	.....	.....
Dallas, Tex.—Oriental	$1.50	.....
Des Moines, Ia.—Kirkwood	.....	.....
Denver, Colo.—Albany	$1.00	$1.50
Detroit, Mich.—Hotel Tuller	.....	.....
Dixon, Ill.—Dixon Inn	$1.00	.....
Edmonton, Alta.—Alberta	.....	.....
Eau Claire, Wis.—Eau Claire	.....	.....
Ft. Wayne, Ind.—Wayne	$1.00	.....
Ft. Worth, Tex.—Metropolitan	.....	.....
Gary, Ind.—Gary	$1.00	$1.50
Grand Rapids, Mich.—Livingston	$1.00	.....
Harrisburg, Pa.—Columbus	.....	.....
Houston, Tex.—Bender	$1.50	$2.00
Hutchinson, Kan.—Chalmers	.....	.....
Idaho Falls, Ida.—Eleanore	$1.00	$2.00
Jackson, Miss.—Royal	.....	.....
Jacksonville, Fla.—Mason	.....	.....
Jacksonville, Ill.—Pacific	.....	.....
Kalispell, Mont.—Kalispell	$1.00	.....
Kansas City, Mo.—Coates	$1.00	$1.50
Lethbridge, Alta.—Alexandria	$1.00	.....
Los Angeles, Cal.—Clark	.....	.....
Los Angeles, Cal.—New Rosylyn	$1.00	$1.50
Louisville, Ky.—Galt	.....	.....
Madison, Wis.—Capital	$1.00	.....
Milwaukee, Wis.—Charlotte	$1.00	.....
Mitchell, S. D.—New Navin	.....	.....
Montgomery, Ala.—Exchange	.....	.....
Montreal, P. Q.—St. Lawrence Hall	.....	.....
Montreal, P. Q.—Windsor	.....	.....
Muskegon, Mich.—Muskegon	$1.00	$1.50
New Orleans, La.—De Soto	$1.00	.....
New York, N. Y.—Breslin	.....	.....
Niagara Falls, N. Y.—Prospect	.....	.....
Norfolk, Va.—Southland	$1.00	$1.50
Oshkosh, Wis.—Tremont	.....	.....
Peoria, Ill.—Mecca	$1.00	.....
Philadelphia, Pa.—New Bingham	$1.50	$2.50
Pittsfield, Mass.—Wendell	$1.50	.....
Portland, Ore.—Multnomah	$1.50	.....
Portland, Ore.—Oregon	$1.00	$2.00
Richmond, Va.—Jefferson	$1.50	$2.50
Richmond, Va.—Richmond	$1.50	$2.50
Roanoke, Va.—Rockledge	$1.00	.....
Rochester, N. Y.—Powers	.....	$2.00
Rutland, Vt.—Berwick	.....	.....
St. Joseph, Mo.—St. Francis	.....	.....
St. Louis, Mo.—American	$1.50	.....
Salt Lake City, Utah—Newhouse	.....	.....
San Angelo, Tex.—Landon	.....	.....
San Diego, Cal.—San Diego	$1.00	.....
San Francisco, Cal.—Argonaut	$1.00	$2.00
San Francisco, Cal.—Sutter	$1.50	.....
Santa Barbara, Cal.—Potter	.....	.....
Schenectady, N. Y.—Mohawk	$1.00	$2.00
Seattle, Wash.—Seattle	$1.00	$2.00
Sheridan, Wyo.—Sheridan	.....	.....
Shreveport, La.—Youree	.....	.....
Sioux City, Ia.—Martin	$1.00	$2.00
Spokane, Wash.—Spokane	.....	.....
Springfield, Mo.—Colonial	.....	.....
Tacoma, Wash.—Olympus	.....	.....
Three Rivers, Mich.—Three Rivers	$2.00	.....
Tucson, Ariz.—Heidel	.....	.....
Vicksburg, Miss.—Carroll	$1.00	.....
Waco, Tex.—New State	$1.00	$2.00
Watertown, S. D.—Kampeska	$1.00	.....
Winnipeg, Man.—St. Regis	$1.50	.....
Winona, Minn.—Winona	.....	.....

* * * *

WHY WE SAVE FOOD

"THE REAL reason why we are taking all these food control precautions in Great Britain is not to protect the civil population at all, but to see that the allied armies at the front get their full rations. I can imagine no greater selfishness on the part of a democracy than to eat its full while it is allowing its soldiers, in that dreary land in which they have been for three years, to go short. The very work of a soldier demands that he should be the best fed man in the world.

"And not only have we to protect the food of the soldier. You are all aware that since the beginning of the war the ships of the British Navy and those attached to it have increased tenfold. Sometimes we only think of the navy in terms of battleships, destroyers and submarines. Added to these are thousands of small craft, trawlers, drifters, observation ships, and on every one of these, summer and winter—and do not forget we have a very severe winter in the North Sea and North Atlantic—are men who must have their daily full ration to carry out their work.

"Quite apart from our navy, which has prevented any German ship from appearing on the ocean for the last eighteen months, are the men in the air. Can you conceive a man going through that hellish life, 18,000 feet up, clothed in electrically-heated clothes and supplied with oxygen to enable him to breathe—can you imagine him doing that on half rations?

"Can you imagine the boys in the trenches surviving a week if we had to cut down their pork and beans and the various things they have to eat? And can you imagine the men and women working in the factories and mines, here and in Great Britain, going short? These are some of the reasons to which we in Great Britain attach such enormous importance in the control of the food of the people."—Lord Northcliffe.

* * * *

Coming Conventions

Illinois Electrical Contractors' Association.

Semi-annual convention, Chicago, Ill., February, 1918. Secretary-Treasurer L. B. Van Nuys, 238 South Jefferson Avenue, Peoria, Ill.

Vermont Electrical Association.

Annual meeting, February, 1918. Secretary-Treasurer C. H. West, Rutland, Vt.

National Association of Electrical Inspectors.

Annual convention, New York, N. Y., March, 1918. Secretary-Treasurer William L. Smith, Concord, Mass.

Wisconsin Electrical Association.

Annual meeting, March, 1918. Secretary George Allison, 1410 First National Bank Building, Milwaukee, Wis.

Southwestern Society of Engineers.

Annual meeting, April, 1918. Secretary C. E. Barglebaugh, 703 First National Bank Building, El Paso, Tex.

Kentucky Association of Electrical Contractors.

Annual meeting, May, 1918, Louisville, Ky. Secretary F. F. Balinoti.

Texas State Association of Electrical Contractors.

Annual meeting, Galveston, Tex., June 15, 1918. Secretary H. S. Ashley, Fort Worth, Tex.

Georgia Electrical Contractors' Association.

Annual meeting, June, 1918, Tybee Island, Ga. Secretary Dan Carey, Atlanta Builders' Exchange, Atlanta, Ga.

* * * *

WANTED—Salesmen for wholesale electrical supply house, to travel in Iowa. Address "81X," care of The Jovian, St. Louis, Mo.

WANTED—Ambitious young man, with electrical experience, in stock room of wholesale electrical supply house. Address "81R," care of The Jovian, St. Louis, Mo.

FOR SALE—One Western Electric 220-Volt D. C., 200 R. P. M., 12 H. P. inter-pole motor. Also one Cutler-Hammer controller for same. Address G. E. WOODWELL, 201 South Main Street, Wichita, Kan.

SHOP MAN WANTED.

Northern electric manufacturer has attractive proposition for all-around shop man familiar with both A. C. and D. C. windings; and motor repair work. Good pay to sober and industrious party. Address "N," care The Jovian, Syndicate Trust Building, St. Louis, Mo.

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THE JOVIAN

Volume Twelve FEBRUARY, 1918 Number Three

Your Old Linen Will Help Win the War

The Red Cross Needs It

The Jovian War Service Bureau calls attention to the following appeal of The American Red Cross

WASHINGTON, D. C.

American manufacturers, architects, and all draftsmen are called upon to render an important service to their country. When the workman has finished with the piece of cotton or linen cloth used in his trade, it is flung aside to be destroyed. The Red Cross is asking now for that discarded material. All over the country thousands of women are earnestly engaged in the manufacture of surgical dressings to be used in the hospitals for our wounded soldiers and sailors. The problem of getting enough white goods for this work is enormous. As long as the war goes on the work must go on if we are to live up to the humanitarian ideals typified to the world today by the Red Cross.

Two kinds of cloth are available—draftsman's tracing cloth and old linen and cotton articles to be donated from private households and, often in large quantities, from hotels. These can be easily collected and handled by the modern laundries, which have now been called upon to perform this work for the Red Cross. With their facilities for collecting, washing, sterilizing and delivering to the local chapters, the laundries are in a position to perform an invaluable service and the least that other trades can do, is to help them in every way. If any manufacturer, architect, or draftsman will go to the slight trouble of calling up either the local Laundry Owners Association or one of the large laundries of his city, he will find them only too glad to send for such cloth as he can give them.

These materials the laundry will handle with the greatest possible care, because, as the National Laundry Journal, for Dec. 15, 1917, says: "Remember it is a matter of life and death—first that you do this work and second that you do it right."

Taking up the task, therefore, in such a spirit, the Journal goes on to give the practical details for treating this draftsman's cloth.

The greatness of the demand for old linen and cotton cloth, is being measured up to by the willingness of the laundries to take over this work. Be sure then, to notify them if you have any of this much needed material. Your promptness to respond to this call may, in sober earnest, become a matter of life or death to some of our wounded men across the sea.

AMERICAN RED CROSS

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

All matter for the news columns of The Jovian, and advertising copy, should reach the Central Offices not later than the first of each month

Advertising rates on application

SIXTEENTH JOVIAN CONGRESS

J. F. Strickland, Po. 30, Sixteenth Jupiter,
Dallas, Texas.

District 1—William R. Phipps, Po. 10676, Neptune, Galveston, Texas.
District 2—Joseph Insull, Po. 16729, Mars, Pittsfield, Mass.
District 3—Harry W. Alexander, Po. 17191, Vulcan, New York City.
District 4—Arthur G. Pierce, Po. 2896, Pluto, Pittsburgh, Pa.
District 5—T. J. Creaghead, Po. 3013, Triton, Cincinnati, Ohio.
District 6—Julien Binford, Jr., Po. 1174V, Avrenim, Atlanta, Ga.
District 7—W. R. Power, Po. 2784, Apollo, Huntington, W. Va.
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In Charge of Central Offices.

PAST JUPITERS' ASSOCIATION, 1916-17

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Past Jupiter Eleven, New York City.

W. N. MATTHEWS, Po. 496-44V
Past Jupiter Twelve, St. Louis, Mo.

HOMER E. NIESZ, Po 306V
Past Jupiter Thirteen, Chicago, Ill.

THOS. A. WYNNE, Po. 11457V
Past Jupiter Fourteen, Indianapolis, Ind.

HENRY L. DOHERTY, Po. 3208-33
Past Jupiter Fifteen, New York City.

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THE APPLIED SCIENCE OF GOOD-FELLOWSHIP

WHEN the secret is discovered for changing the human body into steel or stone and reducing the operation of the mind to mechanical precision, and still retain life and ability to move and act, business transactions will become strictly a scientific operation.

Then in our relationship as beings we will deal with each other as scientific quantities. We will be able to carry on our business transactions with one another on a discount basis of two, five and ten with no concessions and no exceptions. Formalities, sentimental convivialities and exchanges of human felicitations that are a useless waste of time from a scientific standpoint will be discontinued.

We will be automatons, mummified against the influence of human impulses and inspirations. There will be no use for inflection of voice; a word will be a word whether spoken in an angry or a soothing tone.

There will be no discrimination between neighbor or stranger, friend or foe. No favors will be given and none asked.

Of course we will have to become immune against the influences of human sentiment to attain this state of scientific perfection, and to become perfectly immune against sentiment we will have to subdue our own responsiveness to emotion. We will have to become so ossified that we will not care what our fellow mortals think of us, what they say **to** us or what they say **about** us when our backs are turned. We will have to reach a state of scientific perfection where it would be about as congenial to exchange a friendly greeting with one another as it would be to step up and slap a concrete post on one side and say, "Hello, Jim, Old Boy, how are you this morning?"

The question is will we ever be able to attain this scientific state of perfection as long as we are human beings—beings of flesh and blood. Blood, you know, requires a heart to pump it, and a heart will not operate without generating human emotions.

Consequently, as long as we are compelled to conduct business transactions with human beings, we will have to take into consideration the human element. That means that we will have to **act** as human beings, **mingle** with human beings, **co-operate** with human beings, and, in fact, **be** human ourselves.

It is just possible that our search for scientific perfection is somewhat similar to that for perpetual motion. The great obstacle to be overcome is friction.

As a matter of fact the most scientific part of all transactions, business included, is the work of overcoming friction. Of all the methods that have been tried so far, only one seems to have succeeded to any noticeable extent. That is the Applied Science of Good-Fellowship.

The Applied Science of Good-Fellowship operates only through the human element. It is a vibrating energy that generates congeniality through human emotions. It requires a spark of sympathy for its ignition. This spark of sympathy is a flash that emanates from some mutual understanding and appreciation; mutual understanding and appreciation are not transmitted by the rules of science, but by emotion.

Getting business together is the task that is before the commercial and industrial world today. It is the big problem the solution of which will take hard knocks and disagreeable features out of present business methods and make the occupation of man a more pleasant one.

The Applied Science of Goodfellowship is the solvent that coaxes conflicting elements into perfect solution—a lubricant that nullifies the destructive action of friction.

The Jovian Order is the active exponent of that Science in the electrical industry; its humanizing influence will be required until that day—long may it be deferred—when ambition dies, when red blood no longer flows; when men cease to use the gifts God gave them in that battle for supremacy which is the mainspring of **progress.**

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500—COUNT 'EM—500

WITH over thirty Rejuvenations held during the month of January, and approximately 500 new members added to the roster of the Order, Jovianism has taken another step forward. When we consider the stress of war preparation under which we are laboring that it is difficult to think or talk anything but war topics, the fact that we have been able to turn aside from the subject long enough to increase the membership of the Order to this extent has a remarkable significance.

Last month, J. Robert Cruse, Po. 260-8V, Past Jupiter Seven, in making a contribution of $500.00 to his league stated that he made it as a "war contribution," and that he felt he was making it where it would do the maximum amount of good. In this connection he pointed out what the League had accomplished in its work of aiding the Government, by its Red Cross, Liberty Bond sale, Thrift Stamp sale and other activities. He stated that there were splendid opportunities ahead of it to aid the Government in the future, and that he felt his contribution could not be applied in another manner where it would produce as good results.

This incident exactly exemplifies the spirit of Jovianism. It shows that the Order has a capacity for achievement that makes it truly effective in the work of war preparation. Consequently, instead of turning aside from the great question that is before us, those members who have been active in the campaign have been aiding in strengthening an organization that is doing excellent work for our Government.

Another source of gratification lies in the fact that the Rejuvenations were held in almost every section of the country, and brought sufficient new strength to the membership in a number of cities to enable them to organize Leagues and apply for Jovian Charters.

When we realize how much more effective the work of Jovianism can be done by organized Leagues, whether it be that of aiding the Government in its war activities or for the sole benefit of the electrical industry, the true value of the establishment of these new Leagues is apparent.

Complete reports from all the Rejuvenations held have not been received at the time of going to press, but those at hand indicate the increase in membership for January will run something over 500, and at least ten new Leagues will be formed as the result, with the prospects of the formation of several others in the near future.

With this start and the reduction of the initiation fee to $5.00, beginning February 1, there is a splendid prospect ahead for the increase in membership to far exceed that of the past administration.

* * * *

An Appreciative Jovian Writes

"I certainly appreciate the excellent work your Employment Bureau has been doing for me. It has put me in touch with several excellent openings that I have been able to take, but owing to territory have not as yet accepted. Your office has done its part."

The service is free, and is in excellent shape to put men and positions in touch with each other. Can we help you?

THE JOVIAN ORDER COMMERCIAL DIVISION
Syndicate Trust Bldg.,
St. Louis, Mo.

J. N. COLKITT, Po 2627, Sixteenth Comus, who has jurisdiction over the Thirteenth Jovian district, included in which is his home city, Los Angeles. Jovianism in the Pacific Coast region will surely move forward constructively during his administration.

TWO CINCINNATI CLUBS MERGED

CINCINNATI ELECTRIC CLUB AND JOVIAN LEAGUE ARE UNITED.

BRAVING the inclement weather that prevailed, Cincinnati Jovians and members of the industry held a get-together meeting at the Hotel Sinton in that city on the evening of January 15, that will go down in the records of the local industry as a real constructive achievement.

As every one familiar with conditions that have existed in the industry at Cincinnati knows there have been two electrical organizations in that city. The Electric Club of Cincinnati and The Cincinnati Jovian League.

Now there is but one, The Cincinnati Jovian Electric Club. The work of consolidating the two clubs was the incentive that brought the membership out on a night when King Winter was going over the top with an offensive that made zero appear to be a high point on the weather gauge. But if the old autocratic monarch purposely attempted to prevent Jovian activities his drive was a failure.

From now on the work of the members of these two organizations will be united. They will labor in harmony to promote the interest of the industry.

There can be no doubt but that this was the most important move that has been made by those identified with the industry in Cincinnati in several years. It is the culmination of persistent efforts on the part of a number of members in both clubs that have labored earnestly to bring them together.

The meeting was called to order by Frank D. Van Winkle Po. 12965, president of the Cincinnati Jovian League, who appoin-

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the following members as a nominating committee: Thomas J. Creaghead, Po. 3013; Tell S. Berna, Po. 17684, and W. H. Quirk, Po. 12123.

While the nominating committee was in session, a motion was formally considered and adopted consolidating the two organizations.

The nominating committee then reported the following nominations: President, Frank D. Van Winkel, Po. 12965; First Vice-President, Jas. A. Brett, Po. 5904; Second Vice-President O. Bird Marsh, Po. 17718; Secretary-Treasurer, Jos. C. Bowman, Po. 6275.

Executive Committee: W. H. Freeman Po. 1899V; Walter A. Draper, Po. 17695, and W. J. Hanley, Po 152.

In the balloting that followed these officers were elected by a unanimous vote.

Immediately following the election of officers, President Van Winkle appointed a membership committee for the purpose of starting an active campaign for new members. The personnel of the committee is as follows: W. H. Quirk, Po. 12125, chairman; Walter A. Draper, Po. 17695; C. W De Forrest, Po 14321; Chas. Nolloth, Po. 1241; J. D. Nelson, Po. 5914; W. W. Freeman, Po. 1899V; Jas. A. Brett, Po. 5904; A. C. Beattie, Po. 1823; C. J. Smith, Po. 3036, and A. L. Beedle.

Following the transaction of business W. C. Culkins, Street Railway director for Cincinnati, made an interesting address, taking for his subject the "Skip Stop System" which will shortly be put in operation.

He was followed by Walter A. Draper, Po. 1765 vice-president of the Cincinnati Traction Company, and Jas. G. Stewart. The latter made a thrilling address on "Day by Day Patriotism."

The consolidation of the two organizations has been effected in a manner that is satisfactory to the members of each and there is every reason to believe it will mark the beginning of united activities that will bring about the accomplishment of many benefits for the local industry and contribute materially to the growth in membership of the new orginization, bringing into it the full potential strength of the city's electrical interests.

* * * *

CONSTRUCTION CREW IN TEXAS

WITH the object of starting the Jovian work in Texas in an effective manner Jupiter Strickland, and a party of prominent members of the Order left Dallas, Texas, on January 17 for a trip over the state that had been previously planned and arranged.

Included in the itinerary of the trip were the cities of Houston, Galveston, San Antonio, Waco and Fort Worth.

The following members made up the party leaving Dallas: Jupiter, J. F. Strickland, Po. 30-103; Charles W. Hobson, Po. 1, Past Jupiter One; Fred R. Slater, Po. 10685; W. B. Head, Po. 138-108; H. D. Glass, Fred M. Lege, Jr., Po. 131-96; H. S. Cooper, Po. 365; C. L. Martin, Po. 176-56V; Mac F. Sterrett, Po. 93, Ninth Hercules; Ben K. Howard, Po. 1231; R. W. Van Valkenburgh, Po. 1302; Dan G. Fisher, Po. 2173; J. R. Cox, Po. 20072; H. C. Bramley, Po. 12077, and J. P. Griffith, Po. 2177.

The first stop was made at Houston, where the party was met by a committee headed by Charles A. Newning, Po. 2, Past Jupiter Four; including David Daly, Po. 366V; S. R. Bertron, Po. 14416; T. S. Prentice, A. J. Binz, Po. 1921V, Thirteenth Neptune; R. R. Roberts, Po. 2204; G. L. Chestnut, G. H. Froebel, Po. 14466; F. G. Frost, Po. 1415V; G. H. Miller, Po. 10666; John S. Bonner, Po. 23; C. J. Harris, Po. 12097; D. F. Woods, Po. 181; E. T. Barden, Po. 59-102; H. F. MacGregor, Po. 21, Past Jupiter Two; J. A. Tennant, Po. 17965; C. R. George, Po. 368; A. T. Vick, Po. 17968; E. F. Hail, Po. 1924; H. O. Clarke, Jr., Po. 6629; E. E. Reed, Po. 10678 and Ell C. Bennett, Po. 3932-13V, Mercury.

A business session was held in the Rice Hotel from 9:30 to 12 o'clock.

This was followed by an afternoon session held at 4 p. m., which was well attended, and discussion of the trip and Jovian affairs in general was indulged in.

A banquet was held in the parlors of the University Club beginning at 6 p. m., at which a number of speeches were made.

Immediately following the dinner a Rejuvenation was held at the Rice Hotel and thirteen candidates were initiated, the initiation being conferred by Mercury Ell C. Bennett.

The next stop of the party was at Galveston, where a splendid reception was accorded the "Construction Crew."

From Galveston the party returned to Dallas, and leaving again on January 22, the cities of Waco, Fort Worth and San Antonio were visited.

"One of the bright features of the trip," according to The Southwestern Electrician, "was the development of a bunch of electrical orators second to none in the country. Jovians Slater, Head, Cooper and Bennett backed up the brilliant Strickland in fine fashion, while Daly and Clark and other Houston speakers were in fine fettle."

A full and more minute report of the trip, which was one of the most successful Jovian tours of recent years, is promised readers of The JOVIAN in its next issue. This report will be from the pen of H. S. Cooper, one of the leaders of the "Construction Crew," and will contain many interesting features, the details of which are lacking at the Central Office at this time.

* * * *

ECUADOR AND PERU FAVOR AMERICAN ELECTRICAL GOODS

Copies of "Electrical Goods in Ecuador and Peru," Special Agents Series No. 154, can be purchased at the nominal price of 10 cents from the Superintendent of Documents, Government Printing Office, Washington, D. C., or from any of the district or co-operative offices of the Bureau of Foreign and Domestic Commerce.

CHARTERED JOVIAN LEAGUES

Cincinnati	Charter No. 1
Kansas City, Mo.	" No. 2
Pittsburgh	" No. 3
Minneapolis	" No. 4
St. Joseph, Mo.	" No. 5
Louisville, Ky.	" No. 6
Stark County Jovian League (Comprising the towns of Massillon, Canton and Alliance, Ohio.)	" No. 7
Tulsa, Okla.	" No. 8
Eau Claire, Wis.	" No. 9
Harrisburg, Pa.	" No. 10
Wichita, Kan.	" No. 11
Winnipeg, Man.	" No. 12
Bay City, Mich.	" No. 13
Milwaukee, Wis.	" No. 14
Port Arthur, and Fort William, Ont.	" No. 15
Oklahoma City	" No. 16
Galveston, Texas	" No. 17
Muskogee, Okla.	" No. 18
Mansfield, Ohio (Comprising Richland and Ashland Counties)	" No. 19
St. Louis	" No. 20
Southwestern Michigan Jovian League (Benton Harbor, Michigan)	" No. 21
Watertown (Wis.) Jovian League	" No. 22
Akron (Ohio) Jovian League	" No. 23
Wilmington (Del.) Jovian League	" No. 24
Dallas Jovian League	" No. 25
Columbus Jovian League	" No. 26
Denver Jovian League	" No. 27
New York Jovian League	" No. 28
New Orleans Jovian League	" No. 29
Houston Jovian League	" No. 30
Atlantic City Jovian League	" No. 31

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PERSONAL POINTERS

Along the road to Yesterday
There wave inviting shades,
Where memory may fondly dwell
Upon a life's charades.
Through fields elysian the lane
Winds backward to the door
Of that old treasure vault, the past,
With gems heaped on its floor.

* * * *

HERBERT J. BAKER, Po. 4877, who until recently was manufacturer's agent for electrical equipment in Denver, is now electrical and mechanical engineer for the Evergreen Mines Co. at Apex, Colo.

* * * *

GEORGE SIESS, Po. 14579 who has been stores manager of the Cleveland office of the Western Electric Company was recently appointed assistant manager of that office by the company.

* * * *

EMERSON WELKER, Po. 15540, was elected president of the Benton Harbor Jovian League and R. E. Curtis, Po. 19050, secretary-treasurer at a recent meeting of the League members.

* * * *

D. T. LAYLIN, Po. 16472, who until recently was in charge of the electrical department of Strong, Carlysle and Hammond, is now electrical engineer for the Standard Parts Company, of Cleveland.

* * * *

J. F. SPAULDING, Po. 19622, salesman for the Toledo Railways & Light Company, is now in France driving one of the two ambulances the Doherty Company employees gave to France several months ago.

* * * *

K. E. N. COLE, Po. 16734, formerly connected with the general offices of the Fort Smith Light & Traction Company, Fort Smith, Ark., has been made manager of the Van Buren Branch of that company.

* * * *

H. T. DYATT, Po. 12936-81, president of the Rome Wire Company, Rome, N. Y., has been appointed a member of the Underwriters Laboratories Industry Conference for rubber covered wires and cords.

* * * *

W. R. DAVIS, Po. 3769, chief engineer of station A of the Springfield Gas & Electric Company, Springfield, Ill., is now chief instructor of the Naval Radio Service Training School at Dunwoody Institute, Minneapolis, Minn.

* * * *

H. G. HOWARD, Po. 8282, assistant engineer of distribution for the Mixican Light & Power Company, Mexico City, has enlisted with the British forces and at the time of his last communication was in Mesopotamia.

* * * *

ROBERT E. RAE, Po. 2526, formerly connected with the organization of Stanley & Patterson, of New York City, was recently appointed sales manager of the Jones-Motrola, Inc., 29 West Thirty-fifth street, New York.

* * * *

GEORGE L. ANDERSON, Po. 3412, who was formerly connected with the sales force of the Denver office of the American Steel & Wire Company, is now connected with the American Stamp & Tube Company, Bridgeport, Conn.

* * * *

H. H. HOXIE, Po. 16950, has resigned his position as sales manager for the Electric Railway Manufacturers & Supply Company of Seattle, Wash., and is now associated with the North Coast Electric Supply Company of Seattle.

H. F. MacGUYER, Po. 2871

H. F. MacGUYER, Po. 2871, and Ralph C. Patton, Po. 3251, formerly connected with the D. & W. Fuse Manufacturing Company, the former as special representative and latter as electrical engineer, have purchased the business of Bliss-Chester Co. of Providence, R. I., and incorporated it under the name of the Patton-MacGuyer Company. Jovian Patton is president of the company and Jovian MacGuyer secretary-treasurer. They will continue the manufacture of the same lines produced by the Bliss-Chester Co., namely fuse parts, flashlight trimmings, cable lugs, wire terminals, etc. Both are active members of the Order and have a wide acquaintance in the industry. The Jovian extends best wishes for their success in their new undertaking.

NELSON P. HALL, Po. 1314, has been appointed district sales manager for the Chicago territory of the Van Dorn & Dutton Company. He was formerly connected with the sales force of the Electric Service Supplies Company of Chicago.

* * * *

JOHN G. LEARNED, Po. 10948, now business manager of the Commonwealth Edison Company, and H. A. Seymour, are the joint authors of an A B C book that is being offered to central station companies for distribution to resident customers.

* * * *

R. M. ALVORD, Po. 1750, manager of the supply department of the General Electric Company's San Francisco office, has been appointed chairman of the commercial division of the Pacific Coast Section of the National Electric Light Association.

* * * *

RAYMOND W. MURPHY, Po. 10760, who was until recently, in charge of the Pacific Coast offices of the Westinghouse Electric & Manufacturing Company, has been transferred to the Philadelphia office of the company where he is assistant manager.

* * * *

HARRY A. PORTER, Po. 1244, president of the Harry A. Porter, Inc., 40 South Clinton St., Chicago, vice-president of the Chicago Club-Jovian League, was recently elected chairman of the Electrical subdivision of the Chicago Association of Commerce.

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BIG GROWTH IN JO

MORE NEW MEMBERS INITIATED IN THE MONTH

Did you contribute your share to this su

PHILIP S. DODD, Po. 404, has succeeded J. D. Barnhill as president of the J. D. Barnhill, Inc., New York City, Jovian Dodd was vice-president of the company. He was manager of the Electrical Review for a number of years prior to 1909 when he resigned.

* * * *

GERARD SWOPE, Po. 16243, vice-president and general manager of the Western Electric Company was recently decorated with the Order of the Rising Sun by the Emperor of Japan. Jovian Swope recently returned home after spending several months in the Orient.

* * * *

L. E. RICHMOND, Po. 14575, of the Mead Electric Signal Company of Cleveland, Ohio, has recently turned over to the government his grist mill located at Long Branch, N. J. The government will use the mill to grind corn, rye and barley in its efforts to conserve wheat.

* * * *

W. J. CLAUSEN, Po. 19347, has retired from the management of the Winona, Minn., plant of the Wisconsin-Minnesota Light & Power Company, to engage in the coal business at Fulton, Mo. Jovian Clausen has been connected with the Wisconsin-Minnesota company for five years.

* * * *

W. D. GILMORE, Po. 17012, has resigned his position as general superintendent of the Beach City Electric Service Company, Beach City, Ohio, and is now general manager of the General Engineering & Equipment Company, Canton, Ohio, with headquarters at 407 City National Bank building in the latter city.

* * * *

J. D. A. CROSS, Po. 2222, sales manager of the Edison Electric Appliance Company, Inc., has moved his headquarters to the new location of the company at 5660 West Taylor street, Chicago. Jovian Cross was formerly manager of the heating device sales of the General Electric Company at Pittsfield, Mass.

* * * *

E. B. FEWINGS, Po. 8972, has retired as chairman of the Hydro-Electric Commission of Galt, Ont., after a three years service in that capacity. He has been a member of the commission for six years. The Hydro-Electric staff presented him with an easy chair upon his retirement in appreciation of the service he had rendered.

* * * *

GUY E. TRIPP, Po. 143, chairman of the Westinghouse Electric & Manufacturing Company, was recently appointed head of the division of production in the Ordnance Department of the United States Army. He has been granted a leave of absence from the board of directors of the Westinghouse Company and has already entered upon his duties.

C. E. GROESBECK, Po. 6726, has resigned as vice-president and general manager of the Utah Light & Power Co. of Salt Lake City. He returns to New York City to join the Electric Bond & Share Company, which is the fiscal agent for the Utah Power & Light Company.

* * * *

F. H. SMOCK, Po. 19992, sales manager for the Eastern Wisconsin Electric Company, Sheboygan, Wis., was recently elected secretary of the Sheboygan division of the Wisconsin Association of Electrical Contractors & Dealers. He will have supervision over the counties of Calumet, Door, Manitowoc, Kewaunee and Sheboygan.

* * * *

J. D. TODD, Po. 7968, who until recently was connected with the Western Electric Company at Kansas City, Mo., as assistant sales manager, became associated with the Missouri Valley Electric Company, January 1, as vice-president and manager. The offices of the company where Jovian Todd will make his headquarters are 1417-19 Walnut St., Kansas City.

* * * *

BURTON FRENCH, Po. 1494, who has been associated with the Insull organizations at Chicago for the past eighteen years in the operation of public utilities, has opened an office at 492 Continental and Commercial National Bank Bldg., Chicago, as consulting engineer. He is prepared to appraise, examine, investigate and render reports on public utilities for financing and operation.

* * * *

H. B. SEWALL, Po. 3264, until recently connected with the Galveston-Houston Electric Company, Houston, Tex., has been appointed manager of the Puget Sound Traction Light & Power Company with headquarters at Bellingham, Wash. Jovian Sewall was connected with the Stone & Webster properties in the Central and Southwest for a number of years.

* * * *

J. H. DUFRESNE, Po. 3069, formerly auditor and assistant treasurer for the Choctaw Power & Light Company, McAlester, Okla., recently resigned from that position to become auditor of the Minneapolis General Electric Company, Minneapolis, Minn. Jovian DuFresne was chairman of the auditing and accounting committee of the Gas, Electric & Street Railway Association of Oklahoma.

* * * *

FRANK W. HALL, Po. 3520, who has been connected with the Sprague Electric Works of the General Electric Company, except for a short period, continuously for the past twenty-two years in various engineering and sales capacities, has been appointed commercial manager of the company. He succeeds D. C. Durland, Po. 11933, who as announced in a previous issue of The Jovian, resigned to accept the presidency of the Mitchell Motors Company, Inc.

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VIAN MEMBERSHIP

OF JANUARY THAN DURING ALL OF LAST YEAR

ccess? If so—CONGRATULATIONS!

FRED R. FARMER, Po. 655, who has been connected with the Gibson Company of Indianapolis, as sales manager for the past year, was recently elected president of the Beardslee Chandelier Mfg. Company of Chicago. Previous to his connection with the Gibson Company, Jovian Farmer was connected with the Beardslee Company in the capacity of vice-president and director. He succeeds Frank S. Beardslee who becomes chairman of the board of directors of the company.

* * * *

F. J. FOLEY, Po. 6305, until recently manager of the mining section of the industrial department, Westinghouse Electric & Manufacturing Company, East Pittsburgh, has resigned to accept a position as manager of the mining and traction department of the Edison Storage Battery Company, Orange, N. J. Jovian Foley has been connected with the Westinghouse company for twelve years. He began with the service department in New York City and was later transferred to East Pittsburgh.

* * * *

A. H. MEYER, Po. 10972, was appointed general manager of the Bryan-Marsh Division of the National Lamp Works of the General Electric Company, January 1. Jovian Meyer has advanced to the highest position of the company within seven years. He is a native of Nebraska and a graduate of the University of Nebraska in electrical engineering and is 33 years of age. After his graduation he was connected with the Faulkenaw Electrical Construction Company for about a year before going with the Bryan-Marsh Division.

* * * *

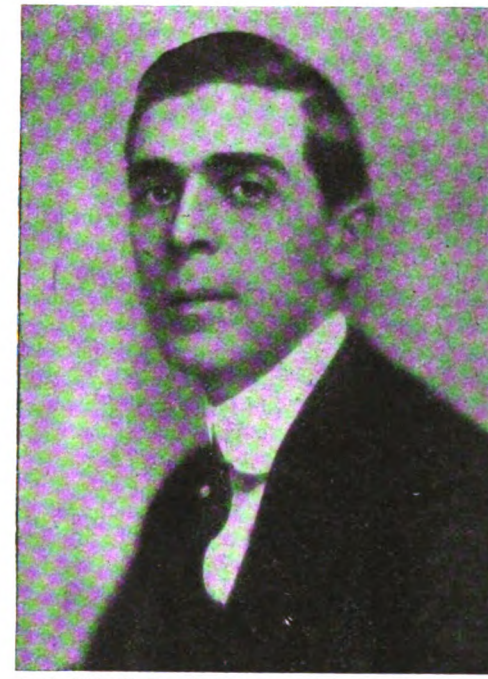
CLYDE W. PIKE, Po. 7494, consulting engineer of the Utilities Bureau has been commissioned a major in the Ordinance Department of the army. Jovian Pike who is 51 years old, is a graduate of the Massassachusetts Institute of Technology in electrical engineering. He began his career as electrical engineer with the Merrimac Manufacturing Company in 1890. From 1900 to 1910, he was vice-president of the Keller-Pike Company, electrical contractors and engineers. He became engineer of the Utilities Bureau in 1916.

* * * *

H. W. WISWELL, Po. 3951, until recently manager of the apparatus department of Brown & Hall Supply Co. of St. Louis, has resigned to engage in business for himself, and has established the firm of H. W. Wiswell & Co., manufacturers' sales agents, with offices at 301 Fullerton Building, St. Louis. Jovian Wiswell was for ten years with the sales department of the Westinghouse Electric & Manufacturing Company. He started with the General Electric Company at Lynn, Mass., later going to Schenectady. Afterwards, he designed the original Packard and Peerless "Core Type" transformers at Warren, Ohio.

* * * *

VICTOR R. DESPARD, Po. 2269, resigned February 1, as manager of the Chicago office of Pass & Seymour, Inc., Solvay, N. Y., to engage in the manufacture of electrical wiring devices. The name of his firm is Despard & Gordon, incorporated in the state of Illinois, with headquarters in Chicago. Jovian Despard is widely known and is one of the most popular members of the electrical industry in the Middle-West. He entered the electrical business in 1906 as salesman for the Mohawk Electrical Supply Company, and became associated with Pass & Seymour two years later. He carries the best wishes of a host of friends in his new undertaking.



E. G. MACK, Po. 1523V, managing director, Crouse Hinds Company, Ltd., who was recently elected to the Executive Council (Electrical Section), Toronto Board of Trade. His election is the realization of a long cherished idea of the electrical industry at Toronto to gain direct representation on the board, and Jovian Mack consented to accept the nomination from a sense of duty to the industry.

* * * *

L. A. FERGUSON, Po. 12249, vice-president of the Commonwealth Edison Company, Chicago, has been elected a member of the board of directors of the Chicago Association of Commerce. Jovian Ferguson has been connected with the Chicago Edison Company for a number of years and has filled important positions in various capacities. In 1901 he was elected president of the Edison Illuminating Companies and re-elected in 1902. He was elected president of the National Electric Light Association in 1902, and president of the American Institute of Engineers in 1908. He is a member of a number of organizations and is always active in civic work.

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NEWS OF JOVIAN LEAGUES

New York The New York Jovian League held its Annual Meeting at Stewart's restaurant, January 8. The following officers were elected for the ensuing year:

President, J. M. Wakeman, Po. 524, Fifth Apollo. Vice President, George Williams, Po. 6849. Second Vice-President, H. A. Pratt, Po. 3139. Secretary, F. M. Feiker, Po. 17197. Treasurer, L. L. Strauss, Po. 8698. Directors: Jas. H. Betts, Po. 6765, Fourteenth Vulcan; L. H. Leggett; F. S. Hartman, Po. 762; J. R. Pollock, Po. 18675, Fifteenth Vulcan; Jas. R. Strong, Po. 742, Sixth Pluto, and Arthur Williams, Po. 1917.

An advisory committee to work in conjunction with the board of directors in formulating plans and carrying on the activities of the League was then appointed, consisting of the following members: J. R. Pollock, Po. 18675, chairman; Walter Neumuller, Po. 5402, Vice-Chairman; Harry W. Alexander, Po. 17191, Sixteenth Vulcan; Earl E. Whitehorne, Po. 2480; A. S. DeVeau, Po. 453; J. W. Jones, Po. 18664; Jas. B. Olson, Po. 307, Martin Oberlander, Po. 2520; Walter Neumuller, Po. 5402; J. J. Raftery, Po. 8573, and William T. Dipple, Po. 18657.

A resolution of thanks and appreciation for the splendid service that had been rendered during his term of office was then voted Arthur Williams, retiring president of the League.

The speaker of the day was the Honorable Theodore E. Burton, former United States Senator and Executive Commissioner of the Inter-Parliamentary Union. His address dealt interestingly of the United States' participation in the World War for Humanity.

At a meeting of the Board of Directors held immediately after the Annual Meeting plans were discussed for the Rejuvenation to be held during January.

* * * *

Chicago A paper prepared by Major Robert A. Milliken, vice chairman and officer of the National Research Council, Washington, D. C., on "The Relation of Science and Engineering to the War," was read December 31, by Professor Lemon in a masterful way.

Announcement was made that another member, Carl F. Brown, had entered the service as a radio operator at the Great Lakes Training Station.

E. L. Callahan, Po. 922, chairman of the Membership Committee, reported applications for membership from fifteen applicants.

S. J. Duncan-Clark, war analyst of the Chicago Evening Post, was the speaker at the meeting of the League, January 3, and delivered a splendid address.

Ex-President H. A. Mott, Po. 17507, opened the meeting and then turned over the gavel to the new president, F. M. Rosseland.

A resolution was unanimously passed appropriating $350 from the club's funds for the use of the entertainment committee to defray expenses of the Annual dinner and entertainment, January 17.

Announcement of the names of the thirty-two new members of the club accepted December 31 was made.

Another name was added to the club's roll of honor. S. R. Todd, Po. 9086, is the member who enlisted. He is now a captain in C. Company, 311th Field Signal Corps.

January 10 Captain Charles E. Merriam told of many interesting things connected with his duties as head of the Local Examining Board.

Harry A. Porter, Po. 1244, made an effective talk in presenting Past President Mott with a handsome Electric-Club Jovian League watch fob.

Letters were read by Secretary W. H. Hodge, from Ensign O. B. Duncan, B. E. Blanchard, the Y. M. C. A. War Fund Campaign Committee, and from Lieutenant Sorrelle, commanding D Battery, 332 Field Artillery, Camp Grant, thanking the Club for recent donations.

The attendance at the annual dinner given at the Hotel La Salle January 17 was 272, including a number of ladies. It was an enjoyable affair.

Cleveland Charles W. Burrows, president of the National One Cent Letter Postage Association, addressed the luncheon meeting, December 27. He advocated universal military training, both as a means of self defense and for the physical development of the young men of the nation.

J. Robert Crouse, Po. 260-8V, Past Jupiter Seven, presented the League with a check for $500 as a Christmas present, stating that it was a part of his war contribution, as he considered the League an active medium for furthering the different features of war work.

An informal party was held in the League's rooms New Year's Eve. Included among the entertainment features were dancing and other novel features.

January 3, the League had for its speaker, E. J. Laibman, of Zhitomir, Russia. Mr. Laibman was exiled to Siberia for his revolutionary activities by the former Imperial Government, and was confined for a year and a half in a Siberian prison from which he escaped. He was captured, but managed to escape the second time. He described Russia as one of the most fertile and least cultivated countries in the world.

At the meeting of January 10, a letter was read from E. H. Martingale, now a captain with the 114th Engineers at Camp Beauregard, La., and also one from F. G. Brightbill, second Lieutenant, C. A. O. R. C. Fort Williams, Me.

Report was made by H. S. Greene, Po. 474-2, campaign leader of the Twenty-Second Ward Red Cross Campaign, of the collection of $5,205.00 to date. Of the twenty-six captains under Jovian Greene, nine are members of the League.

An exhibition of Graphic Arts was held in the club rooms by the Cleveland Advertising Club, January 9-12.

Mrs. Dr. C. F. Hoover was the speaker at the luncheon meeting January 10, and took for her subject, "The War Work Done by the Daughters of the British Empire." Dr. Hoover is Regent of the Daughters of the British Empire in Cleveland, and for the past three years has been active in many forms of war work.

Leon Bacon, of the Mayor's War Advisory Committee, gave a short talk on War Savings Stamps.

"In and Out of the French War Zone," was the subject of an address delivered before the League, January 17, by Dr. S. W. Kelly. He has recently returned from France, where he spent eight months in the field hospitals. He stated that the Red Cross was doing a wonderful work in aiding the soldiers in every possible way.

Sister Ignatius O'Kavanaugh, of Belgium, addressed the League, January 24, and in graphic and impressive language recited many thrilling incidents that she had personally witnessed in her native country. She asserted that natives of that distressed land found many sympathizers among the common soldiers of Germany, but they could not openly express themselves for fear of incurring the wrath of their officers.

* * * *

St. Louis Jas. N. McKelvey, director of Public Safety of the City of St. Louis, was the speaker at the luncheon meeting January 8, and gave a splendid description of the work of the various departments under his supervision. Mayor Henry W. Kiel, who was scheduled to officiate as chairman was called to Washington, and Frederic W. Kehl presided.

At the meeting of January 15, Harry ter Braak, executive secretary of the Industrial Department of the St. Louis Y. M. C. A., gave an interesting address in which he described the work of educating emigrants being done by his department. Mr. ter Braak showed the great necessity for safeguarding the emigrants from Servia, Roumania and other countries that come into this country to prevent them from falling under evil influences. "They are going to be future citizens of America," he asserted. "The proper education and development will make them good citizens. If left to the influence of unscrupulous elements, they may become bad citizens."

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B. H. Mann, officiated as chairman of the day, and outlined the work Mr. ter Braak is doing to aid emigrants from several countries in which he formerly lived.

The meeting of January 22 was what might be termed "Contractors' Day." The executive committee of the National Electrical Contractors and Dealers Association was in session in St. Louis, and attended the luncheon in a body.

Robley S. Stearnes, Po. 1501, Thirteenth Apollo, president of the N. E. C. & D. A., Jas. R. Strong, Po. 742, Sixth Pluto and Seventh Neptune, and E. McCleary, Po. 7314V, Past president N. C. E. A., were the speakers of the occasion.

Fred B. Adam, Po. 242-82V, Missouri State Chairman of the N. E. C. & D. A., presided as chairman of the meeting.

"St. Louis as a Center of Energy," was the subject of an interesting address delivered by Paul W. Brown, before the League, January 29. He showed the natural advantages enjoyed by St. Louis from geographical and other view points and pointed out the city's possibilities for growth and development with the development of the surrounding territory.

Edward A. Chenery, Po. 9028, presided as chairman of the meeting.

* * * *

Milwaukee The Milwaukee League started its company meetings January 3, at the Plankinton Hotel. The meeting was assigned to the Universal Indicator Company, with A. C. Bocher, Po. 15434, officiating as chairman.

B. L. Bobroff, the inventor of the Universal Indicator System was the speaker of the day. His subject was, "Efficiency in Legislative Bodies and Hospitals," and during his address he demonstrated the practical value of the voting machine and the hospital indicator.

A number of members accompanied the Milwaukee Degree Team to Wate town, to participate in the Rejuvenation held in that city January 5, an account of which is given on another page in this issue of the magazine.

* * * *

Dallas, Tex. At the luncheon meeting, January 8, a general discussion concerning the general tour of the states of Texas and Oklahoma for the betterment and advancement of Jovianism was indulged in. The following organization committee was appointed to plan and arrange for the trip:

Jupiter J. F. Strickland, Po. 30-103, chairman. H. S. Cooper, Po. 365; P. K. Baker; C. L. Martin, Po. 176-56V; Ben K. Howard, Po. 1231; Mac F. Sterrett, Po. 93, Ninth Hercules; W. B. Head, Po. 139-108; Fred R. Slater; Chas. W. Davis, Po. 58; R. W. Valkenburgh, Po. 1302; Fred M. Lege, Jr., Po. 131-96; R. S. Wakefield, Po. 2606; Richard Meriwether, Po. 4983, and Dan G. Fisher, Po. 2173.

The committee convened in the office of Past Jupiter Chas. W. Hobson, at 3:00 p. m., January 8, and after the consideration of plans, an itinerary, beginning at Dallas, January 17, including Houston, Galveston, Waco, San Antonio, Fort Worth and terminating at Dallas January 29, was outlined.

Nineteen members including Jupiter Strickland, and Mercury Ell C. Bennett, Po. 3932-13V, announced their intention of making the trip.

In order to make the effort as effective as possible, advance notices to the statesmen and tribunes in all cities were mailed, so that meetings could be called on the dates the party arrived.

An account of this campaign will be on other pages in this number.

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Tulsa, Okla. Election of officers for the ensuing year was held by the Tulsa League, January 14, and resulted as follows: President, P. G. Walker, Po. 6871; Vice-President, Chas. McCallum, Po. 3394.

Plans were discussed and arranged for a Rejuvenation to be held January 26.

C. H. Buckner, of the Y. M. C. A. was the speaker of the day and outlined the work being done by that organization for the benefit of the soldiers in the various camps.

H. N. Bates, Po. 1919, presided as chairman of the meeting.

The members of the League voted to observe a smokeless Monday each week and to invest the money saved in that manner in Thirft Stamps.

A. L. Farmer was the speaker at the luncheon meeting of January 21, and spoke on "The U. S. Boys Working Reserve."

W. M. McDermott, Po. 19679, was chairman.

A number of the members forgot the Smokeless Monday and started to smoke. They were each fined one Thrift Stamp, and the fines amounted to enough for the League to purchase one $5 stamp.

* * * *

OBITUARY

FREDERICK W. MANGER, Po. 5386, general superintendent of the battery plants of the Manhattan Electrical Supply Company, died at his home, 47 Bently Ave., Jersey City, N. J., December 23, after an illness of one week. He had been connected with the Manhattan company for ten years and had been affiliated with the Jovian Order for six years, having been rejuvenated at New York City in February, 1912.

* * * *

JAMES EDWARD LATTA, Po. 12264, general agent of the Underwriters' Laboratories, died at Washington January 17, after a short illness. He was a graduate of the University of North Carolina and of the graduate school of Harvard University. He received his engineering training at the Polytechinc Institute of Brooklyn, at the Stevens Institute of Technology and with the Westinghouse Electric & Manufacturing Company. He was appointed assistant professor of physics at the University of North Carolina in 1903 and later became head of the department. In 1909 he became associated with the Edison Lamp Works of the General Electric Company at Harrison, N. J. He was made editor of Electrocraft in 1911, and with the consolidation of that publication with the Electrical Review and Western Electrician he became associate editor. He was taken ill with pneumonia on January 12 and died five days later.

To Secretaries and Publicity Men of the Leagues:

The Editors of The JOVIAN are anxious to include in its pages the activities of each Jovian League; but they cannot do so unless some one sends in a report of each League's activities. In some instances we get announcements of the program prior to the meeting, but we all know the uncertainty of human existence. The BIG QUESTION with the editor is to know what took place. It is very much similar to the old saying, "A Bird in the Hand—" If it was in the bush and flew away it would be wrong to tell how beautiful it looked in the cage. **Let us have reports of your meetings and activities immediately after you have met and acted.**

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BORN—FEBRUARY

A BOUNCING ADDITION TO TH

(*Jovian Health Policy Now Iss*

WE HAVE heretofore offered and there have been issued Jovian Single Accident, Double Accident, and Single Health policies, and their combinations.

OFTEN we have been asked why the health policy had not also been doubled, to give an increased coverage to those members desiring it.

TO MEET this demand and to make the list still more complete we have now arranged to issue JOVIAN DOUBLE HEALTH POLICIES, doubling all the benefits and provisions of the Single Health Policy, at a yearly premium of $40—an unusually low rate and big saving (approximately $30) from the ordinary cost of such protection.

UNDER this Jovian Double Health Policy a weekly indemnity of $50 is paid for disabling sickness, and where the illness results in permanent disability, a total sum of $5000, less the weekly indemnity paid, will be given the insured at the end of fifty-two weeks.

IN OTHER WORDS, should the disabling sickness continue fifty-two weeks and the disease result in the complete loss of the use of both eyes, hands or feet, or one hand and one foot, totally disabling the insured from earning his living, the company will then pay him, in addition to the $2600 weekly indemnity already paid (52 weeks at $50), a further sum which shall bring the total payment to $5000.

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Single Accident Policy.....
Double Accident Policy.....
Single Health Policy.....
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Double Health Policy...

Clip and Mail the Coupon Today

PARTICULARS REGARDING THE PRO
POLICIES, WHICH ARE IN ESSENTI
ACCIDENT AND HEALTH INSURAN

IF YOU SO DESIRE, DATE YOUR APPLICATION TO TAKE EFFECT WHEN SOME OF YOUR PRESENT INSURANCE EXPIRES—PAY NOT UNTIL YOU RECEIVE THE POLICY.

THE JOVI

SYNDICATE TRUST BUILD

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1, 1918—10 A. M.

E JOVIAN INSURANCE FAMILY

ied at a Yearly Saving of $30)

WE ARE CONSERVING FOOD, TIME, DAYLIGHT AND ENERGY, that the world may be fed, clothed and warmed, but unless we save every dollar possible our incomes will not meet the increased demands of these times.

THESE JOVIAN INSURANCE RATES afford you an opportunity to make your dollar go farther in securing protection for yourself and family.

PRACTICALLY ALL OUR NECESSITIES NOW COST MORE and it is unusually gratifying to realize that here is an agreed business necessity—accident and health protection, without exemptions or exceptions—offered at an annual saving of from three to fourteen times the four-dollar yearly cost of belonging to the Jovian Order, through whose efforts this annual saving to its members is made possible.

BUY JOVIAN POLICIES AND SAVE an amount on your Accident and Health Insurance that will enable you to increase your investments in Liberty Bonds, Thrift Stamps, and other patriotic activities.

OMBINATIONS NOW
LABLE

	Annual Premium	Approximate Annual Saving
.....	$12.00	$13.00
.....	24.00	26.00
.....	20.00	15.00
.....	40.00	30.00
Single		
.....	32.00	28.00
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.....	64.00	56.00

TECTION AND BENEFITS OF JOVIAN
ALS THE SAME AS ALL STANDARD
NCE, ARE YOURS FOR THE ASKING.

AN ORDER

NG · ST. LOUIS

EVERY DOLLAR YOU INVEST IN JOVIAN INSURANCE, RELEASES NEARLY ANOTHER DOLLAR FOR YOUR OTHER PRESSING NEEDS.

Sign—Tear Out—Mail NOW!

THE JOVIAN ORDER

GENTLEMEN:

Send me complete information relative Jovian Accident and Health Insurance at greatly reduced rates.

(Signed) .....

(Address) .....

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JANUARY REJUVENATIONS

WATERTOWN, WIS.

FIRST TRIBUNE A. R. SCHURMANN, Po. 17653, with the able assistance of Second Tribune, Walter O. Wickler, Po. 20000, and other members of the Order in the City of Watertown, have been stirring things up by their activities within the past thirty days. They held two Rejuvenations during the month of January. The first on the 5th, when fourteen candidates were initiated and a splendid Joviation was held, and the second on the 14th, when they came back with another and initiated four candidates.

Forty-two members were in attendance at the Rejuvenation of January 5, including the Milwaukee Degree Team that conferred the initiation.

W. R. Patton, Po. 1090, Fifteenth Argus, presided as chairman of the Joviation.

The principal speakers were: Carl Golin, Po. 12385V, Statesman for Wisconsin, and E. V. Ziekursch, Po. 16625.

Among the prominent candidates were: A. C. Babson, manager Watertown Division Wisconsin Water & Light Company, and V. P. Kaub, editor Watertown Times.

Those deserving special mention, according to reports, for their activities in making the affair a success, are E. V. Ziekursch, Po. 16625, who was in charge of the Milwaukee attendance, and Second Tribune Walter O. Wickler, Po. 20000, who was active in securing candidates.

The Degree Team: Jupiter and Neptune, Carl Golin, Po. 12385V; Pluto, R. E. Moody, Po. 15991; Vulcan, F. V. Ziekursch, Po. 16625; Mercury, W. A. Haig, Po. 16623; Hercules, M. J. Schmidt, Po. 17018; Apollo, A. F. Kiefer, Po. 19976, and Avrenim, S. G. Haskins, Po. 7359.

Four candidates were initiated at the Rejuvenation held in Eagles Hall January 24. Included among them were Henry C. Uttech, manager and secretary of the Lebanon Telephone Company and G. A. Richards, secretary of the Brandt-Dent Fixture Company.

Grover C. Schmidtt, Po. 20048, presided as toastmaster of the banquet, and addresses were made by First Tribune, A. R. Scheurmann, Po. 17653; Second Tribune, W. O. Wickler, Po. 20000 and Grover C. Schmidtt, Po. 20048.

The initiatory ceremony was given in the lecture form.

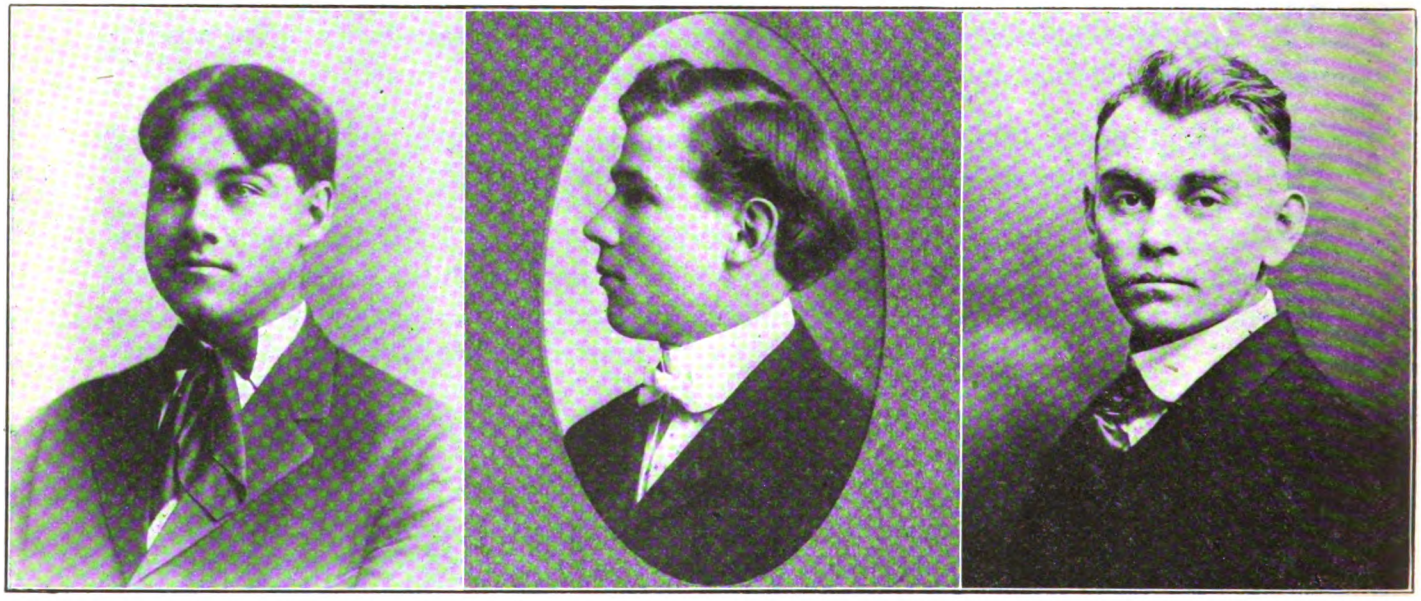
HOUSTON, TEX.

HOUSTON members of the Order held an enjoyable Joviation and Rejuvenation in that city on the evening of January 18. Starting with a Joviation at the University Club that lasted from 6:00 to 8:00 p. m., the attendance then repaired to the Rice Hotel, where the candidates were initiated.

First Tribune, Frank G. Frost, Po. 4015V, presided as chairman of the Joviation, and introduced as speakers: Jupiter, J. F. Strickland, Po. 30-103; Mercury, Ell C. Bennett, Po. 3932-13V; F R. Slater, Po. 10685; Fred M. Lege, Jr., Po. 131-96 and W. B. Head, Po. 139-108.

Among the notable guests present were prominent Jovians who composed the party touring the State, with Jupiter J. F. Strickland. Included among them were: C. W. Hobson, Po. 1, Past Jupiter One; H. F. McGreagor, Po. 21, Past Jupiter Two; Chas. A. Newning, Po. 2, Past Jupiter Four and Mercury Ell C. Bennett, Po. 3932-13V.

The lecture form of initiation was used in Rejuvenating the candidates and its effectiveness was fully demonstrated.



Three officers of the newly formed Watertown (Wis.), Jovian League who were active in bringing its membership up to League strength with two Rejuvenations in January. Reading from left to right: Walter O. Wickler, Po. 20000, president; H. J. Hippler, Po. 20007, secretary-treasurer and A. R. Schurmann, Po. 17653, First Tribune.

Among the prominent candidates initiated were: C. L. Anderson, manager of the General Electric Company, L. C. Bradley, district manager, Stone & Webster Corporation; R. S. Dauney, secretary-treasurer, Houston Lighting & Power Company, and Raymond Ernest Lee, auditor Houston Lighting & Power Company.

* * * *

FOND DU LAC, WIS.

FIRST TRIBUNE W. F. BRIGGS, Po. 12382, and other members of the Order held a Rejuvenation at the Palmer Hotel in Fond du Lac on the evening of January 24, initiating five candidates.

An enjoyable Joviation was held in connection with the Rejuvenation, at which A. G. Carson, Po. 13999, and W. F. Briggs, Po. 12382, made addresses.

It is the intention of local Jovians to increase the membership and form a League as soon as possible, and this Rejuvenation was but the forerunner of others that will be held in the near future for that purpose.

The lecture form of initiatory ceremony was used at the Rejuvenation, and was given by W. F. Briggs, Po. 12382; Jupiter, J. Adams, Po. 12378, Mercury, and A. G. Carson, Po. 13999, Mars.

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Mansfield Rejuvenation and Joviation

MANSFIELD

MANSFIELD JOVIANS again added a substantial increase to their membership with a Rejuvenation held at Eagles Hall in that city on the evening of January 24. The Rejuvenation was a success from many standpoints. Twenty-seven candidates were initiated, and the attendance numbered seventy-five, including many prominent visitors from other cities.

The initiatory ceremony started promptly at 8 o'clock and was in charge of J. L. Stone, Po. 19724, who officiated as Jupiter.

At the Joviation which followed, E. F. Wickwire, Po. 15431, presided as chairman, introducing as speakers: W. O. Custer, Po. 6246; Mayor, H. E. Brunner; L. J. Lemen, Po. 13195; G. W. Lowrey, Po. 19746 and R. E. Burger, Po. 19740.

Among the notable guests present were: W. O. Custer, Po. 6246 and L. J. Lemen, Po. 13195, Massillon, Ohio, and W. H. Bloss, Po. 13469, Indianapolis, Ind.

H. E. Brunner, Mayor of the City of Mansfield, and T. R. Robinson, Prosecuting Attorney, were among the candidates initiated.

A very delightful entertainment program was enjoyed by the attendance. The performance was given by the Newman entertainers. Little Margaret Newman, 3 years old, a member of the troupe was presented with $33.00 worth of Thrift Stamps, by the attendance in appreciation of her singing.

The following Degree Team officiated: Jupiter, J. L. Stone, Po. 19724; Neptune, Harry Gurney, Po. 19918; Pluto, Otto J. Fink, Po. 19939; Vulcan, Tod Tapper, Po. 19881; Mercury, E. B. Snyder, Po. 19753; Hercules, Jos. Parrott, Po. 19723; Mars, G. T. Tavernner, Po. 19954; Apollo, L. C. Dye, Po. 19917; Avrenim, H. A. Waite, Po. 19885 and Imps, G. A. Ralston, Po. 19750, and D. W. Hite, Po. 19878.

This is the second Rejuvenation held by First Tribune, E. B. Snyder, Po. 19753, and his able assistants within less than sixty days. The candidates initiated total 51, more than doubling the membership of the League.

* * * *

COLUMBUS, OHIO

EIGHTEEN new members were initiated into the Order at Rankin Hall, in Columbus, Ohio, on the evening of January 26. The Rejuvenation was conducted by First Tribune, W. V. C. Bulkeley, Po. 17998, and other members of the Order, and was a very successful affair from many standpoints.

It followed the application for a Jovian charter which was made a short while before.

These candidates added to the previous membership of the Order at Columbus form the basis for a splended League, which it is the intention of a number of loyal members in that city to build up.

There were forty members in attendance at the Rejuvenation.

The Lecture form of initiation was used.

Among the prominent candidates Rejuvenated were: Philander Van Burington, secretary and auditor, Columbus Railway, Power & Light Company, John L. Tinchell, manager mill and mine department, Schvedinger-Mann Company and Bruce Masters, New Business Department, Columbus Railway Power & Light Company.

* * * *

GALVESTON, TEX.

TWENTY-THREE members of the Order were present to participate in the Rejuvenation and Joviation held in Galveston, on the evening of Januray 31. The affair was held at Roger's restaurant, and sixteen candidates were led forth and bathed in the bright glow that streams down from Mount Olympus.

To quote from the local press in Galveston, "The affair was the most enthusiastic one ever held in Galveston by members of the electrical fraternity."

According to L. M. Kelsey, Po. 11350, and other members of the League this addition of new members will place them in a position to take a more active part in the civic affairs of the city, and place the League on a par with other organizations.

C. W. Genard, Po. 10638, chairman of the entertainment committee, was in charge of the arrangements for the meeting, while, L. M. Kelsey, Po. 11360, First Tribune, was in charge of the campaign for new members.

Addresses were made at the Joviation by Howard Jolly, Po. 16826, and Max Levy, Po. 10652, and candidates F. A. Rollfing, R. A. Lyons and W. B. Gibson.

* * * *

CARLSBAD, N. M.

WHILE people in other sections of this great country of ours are shivering, and shoveling coal and are thankful if they have coal to shovel, down in Carlsbad, New Mexico, the inhabitants attired in Palm Beach and other Summer raiment are flirting with pink lemonade, while zephyr breezes buzz languidly through the swaying foliage.

To the poor mortals who inhabit the climes where Jack Frost brews an incentive for activity, it is not to be wondered at that we bestir ourselves. We have to do it to keep up enough circulation to ward off chilblains. But imagine activity, and strenuous activity, under the afore-mentioned climatic conditions.

Imagine a First Tribune, operating singlehanded, rounding up eight wandering satellites, leading them to the foot of Jove's throne and compelling them to vow eternal fealty to the reign of Jupiter.

That is just what First Tribune, E. A. Roberts, Po. 17780, did. The records of Jovianism will henceforth show that he captured and subdued these eight wandering satellites on the evening of January 29, and that he performed this act in the offices of the Public Utilities Company. As our old friend, Will Shakespeare, would have said: "'Twas a most gallant performance."

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TULSA, OKLA.

TULSA Jovians made a night attack on the trenches of the unorganized in that city on the evening of January 26, and brought in prisoners outnumbering the attacking party by eleven. There were forty five members in attendance and the candidates numbered fifty-six.

To the generalship of First Tribune P. G. Walker, Po. 6871, and his able staff of co-operators and counselors may be attributed the credit for this grand coupe. While full reports concerning the details of the battle are lacking it is evident that thorough preparation had been made for the advance.

Among the guests present were: Sixteenth Apollo Galen Crow, Po. 925V, and W. B. Miser, Po. 894, of Dumwright, Okla.

The Rejuvenation was held in the K. of P. Hall, as was also the splendid Joviation that followed.

Congressman Crow presided as toastmaster of the banquet. The entertainment was in the form of a vaudeville performance, and was staged by a troupe from the Broadway theater.

The following Degree Team performed the ceremony in a very impressive manner: Jupiter, Galen Crow, Po. 925V; Neptune, T. D. Williamson, Po. 19766; Pluto, W. B. Miser, Po. 8961; Vulcan, L. B. Stark, Po. 2207; Mercury, P. G. Walker, Po. 6871; Hercules E. A. Wilcox, Po. 6830V; Mars, A. B. Dugger, Po. 19581; Apollo, H. D. Jenkins, Po. 19585; Avrenim, A. J. Ehret, Po. 19582; Imps, F. H. Baxter, Po. 19672, and R. M. Griffith, Po. 19583.

* * * *

MUSKOGEE, OKLA.

MUSKOGEE Jovians proved themselves heroes immediately following a Rejuvenation held at the Muskogee Gas & Electric Company's Club Rooms on the evening of January 30.

Leaving the Rejuvenation at eleven o'clock they beheld flames bursting from a residence a short distance away. Rushing up to the house they broke open the door and entered. About twelve people were in the house all asleep. The fire had secured a good start and it was only by quick work that the occupants were saved.

The Jovians carried a number of women and children out of the house and were instrumental in saving the lives of at least ten people.

Three candidates were initiated at the Rejuvenation. The lecture form of initiation was conferred by J. F. Owens, Po. 19818, and L. A. White, Po. 14275.

First Tribune F. A. Strassweg, Po. 19821, was in charge of the Rejuvenation.

* * * *

WILMINGTON, DELAWARE

WITH the initiation of 41 candidates at the Nobis Hotel, on the evening of January 31, Wilmington Jovians perfected arrangements for the establishment of a League that it is felt will be of great benefit to the local electrical industry in that city.

The Rejuvenation and Joviation brought the members of the industry more closely together than they have been in years, and promoted a feeling of harmony that is bound to bring constructive co-operation in the development of business.

First Tribune, H. E. Shelton, Po. 14400, and other members who contributed to the success of the affair are to be congratulated for their efforts.

Among the prominent candidates were: John W. Willis, general manager, New Castle Leather Company and Frank L. Garrett, president of Garrett, Miller & Company.

H. K. Miller, President of the Wilmington League, presided as chairman of the banquet.

The principal speakers were: Washington Devereaux, Po. 2367, John Wensor, and F. J. Carroll, Po. 16027, of Philadelphia.

Workers who from reports deserve special mention for their efforts in making the affair a success are: J. Paul Brown, Po. 8126; Wm. H. Hall, Po. 4786, C. H. Schafer, Po. 2252, C. S. McGill, Po. 4506V; O. T. Hall, Po. 9165 and H. E. Shelton, Po. 14400.

The lecture form of initiation was used to initiate the candidates.

OKLAHOMA CITY, OKLA.

OKLAHOMA CITY Jovians held a Rejuvenation at O. K. Corken's Hall in that city on the evening of January 11, and brought into the Order a number of desirable candidates who First Tribune F. J. Meyer, Po. 1484, had rounded up for the occasion.

The candidates numbered 18, among whom were: James A. Jones, president and general manager, Home Refining Company; Ray T. Hoffman, construction engineer, Oklahoma Gas & Electric Company, Sapulpa, and Harry M. Montgomery, general manager, Sulphur Ice Light & Power Co., Sulphur, Okla.

Fourteen members of the Order were present to confer the initiation ceremony.

Those deserving special mention for their efforts, according to reports were J. A. Wiseman, 16776, and W. J. Murphy, Po. 10509, in their portrayal of their parts in the work of the Degree Team.

The following members made up the Degree Team: Jupiter R. D. Sheldon, Po. 18856; Neptune J. P. McHale, Po. 10504; Pluto A. L. Mullergren, Po. 18853; Vulcan F. J. Meyer, Po. 1484; Mercury A. Hirsch, Po. 2226; Hercules W. J. Murphy, Po. 10509; Mars J. A. Wiseman, Po. 16776; Apollo W. H. Stout, Po. 961, and Imps, W. K. Danvers, Po. 18841 and Will Christy, Po. 19425.

Ten more candidates were added to the roster of the Order at the Rejuvenation held January 30, held in the Retailers' Hall The lecture form of initiation was given by Statesman-at-Large Galen Crow, Po. 925V.

No Joviation was held in connection with the Rejuvenation.

* * * *

DENVER, COLO.

A REJUVENATION that came on the wave of increasing enthusiasm, and that portends to be the forerunner of other Jovian events of importance was held at the Kenmark hotel in Denver on January 30.

Nine candidates were initiated. The ceremony was conferred by A. C. Cornell, Po. 5756, who used the Lecture form of initiation.

First Tribune T. B. Burnitt, Po. 3426V, was in charge and was ably assisted by Second Tribune Herbert S. Sands, Po. 1708, both of whom made addresses outlining the work of the League for the coming year.

Among the candidates initiated were: F. J. Rankin, electrical engineer for the Colorado State Public Utilities Commission; W. D. Emerson, Po. commercial manager, Mountain States Telephone & Telegraph Company, and Eugene Weber, mechanical engineer Denver Tramway Company.

In addition to the Rejuvenation, a vote was taken and application for a Jovian Charter was authorized.

A nominating committee was appointed with instructions to report at the next regular meeting, February 12, when officers for the ensuing year will be chosen.

It was formally decided to hold luncheon meetings twice each month, on the second and fourth Wednesdays.

The League has affiliated with the Electrical Bureau of the Denver Civic & Commercial Association.

Benedict Shubert, Po. 3496, was chosen as representative of the League on the Board of Directors of the Association.

* * * *

ATLANTIC CITY

ATLANTIC CITY Jovians brought their membership up to League strength with a splendid Rejuvenation and Joviation held in that city at the New Paris Cafe on the evening of January 28, and immediately following the Rejuvenation they applied for a Jovian Charter.

Twenty-three candidates were initiated following the Joviation which started at 6:30 p. m. The lecture form of initiation was used to good effect.

First Tribune, A. J. Purinton, Po. 9643V, was in charge of the Rejuvenation, and was elected temporary president of the League.

(continued on page twenty-nine)

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The Return Circuit

Edited by W. R. Joyes, Po. 13813.

OPPORTUNITY

By W. R. J.

Once a visitor came rapping
On my door while I was napping,
One I'd waited for expectantly
For many a night and day,
But I was so long in taking
Time to yawn awhile e'er waking,
That I found upon arising
He had passed upon his way.

Being greatly agitated,
From that moment I awaited,
Vowing that he'd never find me
Sleeping when he came again,
And I waited little caring
Anything about preparing,
So he came and found me useless
And my vigil was in vain.

Thus my youthful dreams exploded,
And my pride was somewhat goaded,
So I settled down to learning
Little unimportant things;
And one day while I was learning
How I might increase my earning,
Opportunity came tapping
On my shoulder with its wings.

* * * *

Microscopic Inspections of Human Characteristics

CONCEIT

Over this characteristic which is attached leech-like to human personality, there is enough camouflage to make a superdreadnaught look like a side-wheel ferry-boat.

If you dig for it deep enough you will strike a vein of it running its zigzag course through so many innocent lines of human endeavor that you will begin to wonder if it isn't really the secret of human existence that philosophers have sought for throughout all ages.

When you get that far don't stop. Keep on panning awhile and you will find that it is the most soluble characteristic possessed by man.

A couple of failures, a banana peeling, a severe frown or two, a real sharp-pointed sneer, or the toe of father's shoe is sufficient to vaporize ninety-seven per cent of the common variety.

Of the remaining three per cent, the greater part is what might be termed ingrown, or of hereditary origin. The reason it is not so readily dissolved is because it is not camouflaged. It has become obdurate through the regular process of intuitive petrification and is therefore oblivious to its own existence.

This is what is termed the hopeless, or incurable state. Scientific research shows it is devoid of the basic strata of reason or emotion and therefore unapproachable, either through the channels of the intellect or by aerial projectiles because it can only exist where there is a complete void.

The rules established for its identification by some observers are: A very high collar, a drawling accent, a perpetual registration of blankness, and three exclamatory sentences expressing surprise, reserve and weariness.

The most common camouflage under which it parades is dignity. But ostrich-like it rarely camouflages anything except its head. After getting into its make-up it looks into the glass and then struts forth trying to impress upon the world its austerity, with density, awkardness and the lack of importance pinned like comic valentines to its coattail.

The only hope that it may ever be of any value lies in the possibility of transforming it to a metallic substance. With the price of brass soaring to such fabulous figures, it offers a wonderful opportunity for scientific research, but it will probably take a lot of smelting to get it to a state of usefulness.

* * * *

The Price we are Bound to Pay

By W. R. J.

We have sought through the ages for leisure,
For a place we may take our ease;
We have followed the mirage of pleasure,
Our eternal desires to appease.
From the primitive stone-hatchet ages,
When we bedded our caves with grass
Right down to this age of high wages,
When we travel behind a plate glass.

And while we have sought for enjoyment—
For things with excitement and thrill—
We have schemed how to dodge the annoyment
That is ours when we settle the bill.
We have schemed how to dodge the collector,
To side-step the check that we drew,
But always it comes as a specter,
To remind us the payment is due.

Be it time that we aimlessly wander
Avoiding all labor and strife,
Be it talents of ours that we squander
On the frivolous features of life;
We have counted the joys we have taken
As part of the spoils of the play,
But we find the account when we waken
And we find that we have it to pay.

Dem Dreary Days

By W. R. J.

I'se mighty tired ob winter time an' all
de snow an' sleet;
I'se mighty tired ob howlin' win's an' clouds
dat scurry fleet
Across de dreary, dismal sky lak dey was all
pursu'd
By some ole ghostly 'p'rathun dat am hooded
like a druid.

It makes you feel dat way out dere, some place
across de sky,
Dere's som'thin' awful comin' when dey goes
a scootin' by.
It makes yo' spirit berry sad an' keeps you
in suspense,
An' you am much dispondent when de bleakness
am intense

Ah sho' am mighty anxious fo' some little sign
ob spring;
A little warmin' sunshine or a breeze or
anything
To rouse mah hopes dat bye an' bye de flowers
gwine to bloom
An' Mister Robin Redbreast gonna break dis
spell ob gloom.

Las night Ah pick'd mah banjoh an' Ah sung
"De Mockin' Bird,"
An' hones'ly Ah almos' cried a thinkin' dat
Ah heard
De voice ob one a singin' to its babies in
dey nes'
An' mockin' every kind ob soun' it thought
would please dem bes'.

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PRACTICAL LESSONS IN ELECTRICITY

LESSON THIRTY-FOUR

ALTERNATING-CURRENT SWITCHBOARDS

By TERRELL CROFT

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ALTERNATING-CURRENT Switchboards may be divided into two general classes, (1) self-contained and (2) remote control. The remote-control boards can be further subdivided into, (a) *mechanical remote control* and (b) *electrical remote control*. It is usually good practice, for all except extraordinary conditions, to use self-contained switchboards for alternating-current service at pressures not exceeding 6600 volts where the capacity of the station does not* exceed about 3000 kva. Where the capacity or the voltage exceeds the values just noted, remote-control equipments should be used. A feature which distinguishes alternating from direct-current switchboards is that it is standard practice to use oil switches instead of air-break switches for rupturing the alternating-current circuits on voltages as low as even 240. Inasmuch as the three-phase system is now adopted for almost every energy-generating-and-transmitting installation, a majority of the alternating-current switchboards which are now installed are for three-phase service.

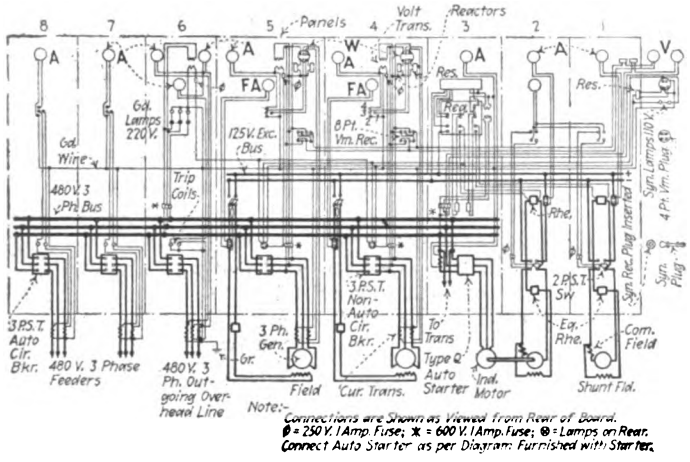

Fig. 27—Typical Wiring Diagram for a 240 or a 480-Volt Switchboard*

*Westinghouse Electric & Manufacturing Co.

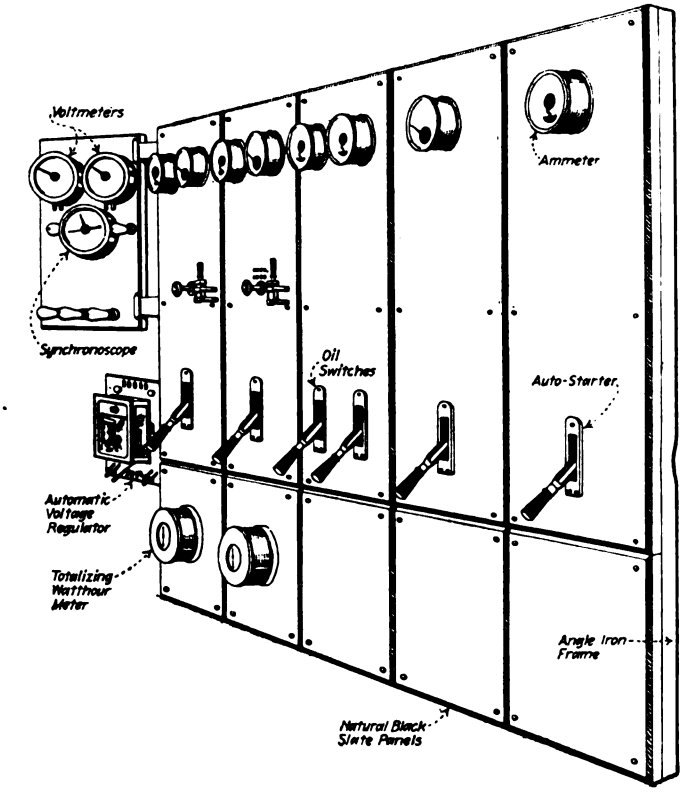

Fig. 28—Perspective View of the Typical 2400-Volt, Three-Phase Switchboard for Power and Lighting Service in a Small Town*

*C. H. Sanderson, "SWITCHBOARDS FOR ALTERNATING-CURRENT POWER STATIONS."

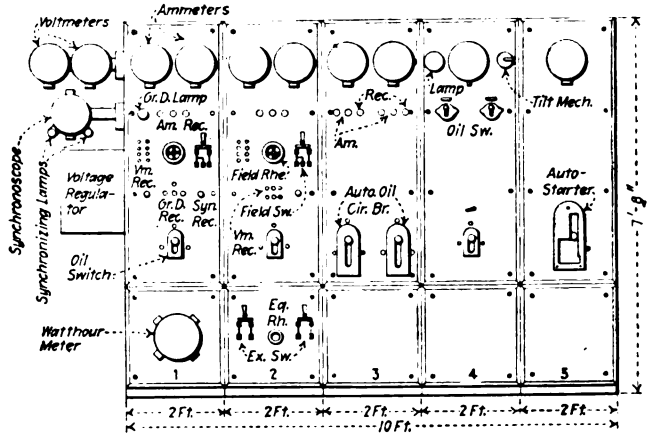

Fig. 29—Front View of the 2400-Volt, Three-Phase Lighting and Power Switchboard

Alternating-current switchboards for three-phase 240 and 480-volt service are (except those of great capacity) nearly always self-contained. The wiring diagram for a typical outfit of this character is shown in Fig. 27. The general appearance of such a board would be the same as that for a 2400-volt board shown in Fig. 28. It should be noted that oil switches are used for the three-phase switches in this installation. Switchboards for 2200 to 2400-volt three-phase alternating-current service are also nearly always self-contained. Figs. 28, 29 and 30 show the external appearance of a typical switchboard of this character while Fig. 31 delineates the detailed wiring diagram. Fig. 32 shows a single-line diagram of the board. This equipment is

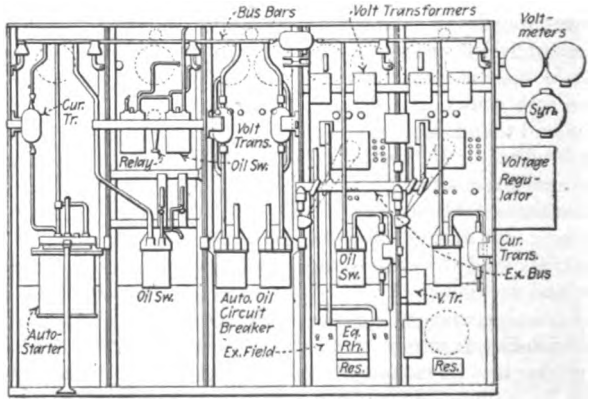

Fig. 30—Rear Elevation of the Switchboard the Perspective and Front Views of Which are Shown in Other Illustrations

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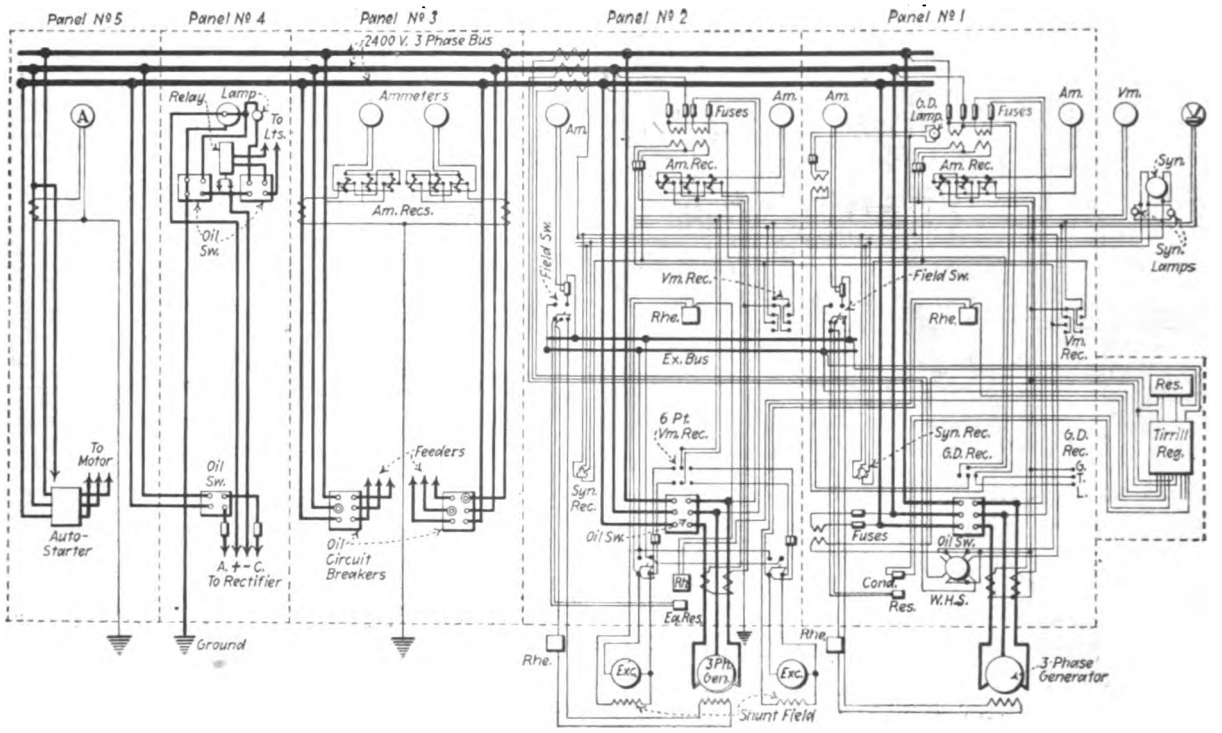

Fig. 31.—Connection Diagram of the Switchboard of Figs. 29 and 30

typical of that which would be used in a central station which supplies light and power to a small city. Two generators, G_1 and G_2 (Fig. 32), and two exciters, E_1 and E_2, serve four feeders, F_1 to F_4. Panels 1 and 2 are the combination generator-and-exciter panels. An automatic voltage regulator is mounted at the end of the board on panel No. 1. Panel 3 serves two three-phase power feeders. Panel 4 controls the rectifier circuits for the series direct-current arc lighting. Panel 5 carries the auto-starter and ammeter for the alternating-current-motor end of a synchronous-motor-generator set which supplies the town with direct current. Less expensive switch boards of the general construction indicated in Fig. 1 may be purchased for simple alternating-current installations but inasmuch as plenty of room is desirable on an alternating-current switchboard the 90-inch high type (Fig. 28) is used preferably.

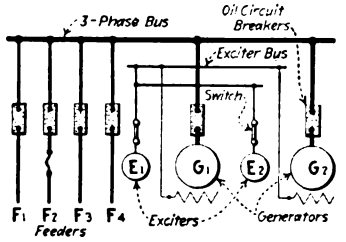

Fig. 32—Single-Line Diagram of the Switchboard of Fig. 31

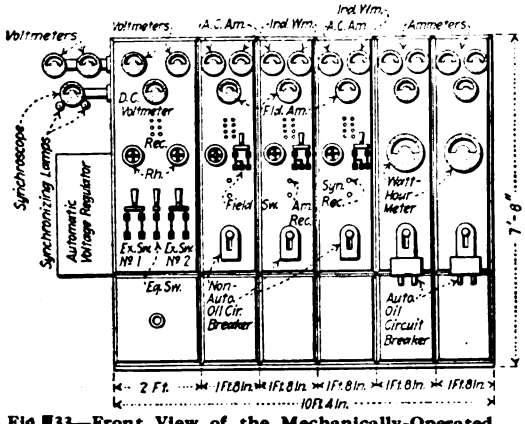

Fig. 33—Front View of the Mechanically-Operated Remote-Control Switchboard

NOTE.—The advantages accruing through the use of remote mechanical control switchboards as compared with self-contained switchboards have been thus summarized by C. H. Sanderson in his "Switchboards for Alternating-Current Power Stations":—(1) All high voltages are removed from the panels, thus permitting ready inspection of the instrument and control wiring, eliminating danger of injury to attendants from contact with live parts, permitting the location of the board to much better advantage as regards the remainder of the installation because less space and less protection are required. (2) Panels are not subject to the mechanical strains due to automatic operation or to the dead weight of the apparatus. (3) In case of marble panels their appearance is not marred by stains from creeping oil. (4) Violent explosions which sometimes occur upon the opening of heavy currents or the possible failure of a circuit-breaker will not injure the panels and, if the circuit-breakers are sufficiently spaced or are enclosed in fireproof cells, adjacent circuit-breakers will not be affected. (5) The panels may be much narrower, the reduced cost thereof offsetting, to a considerable extent, the additional cost of the remote-control feature. Moreover, the decrease in total length of the board may result in a very material saving in cost. (6) A more compact arrangement of the apparatus is of great assistance to the operator, approaching as it does more nearly to the compact and efficient arrangements obtained by means of control desks. (7) Much shorter main connections are made pos-

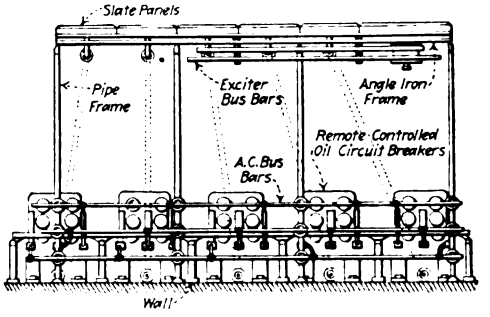

Fig. 34—Plan View of the Mechanical-Remote-Control Switchboard

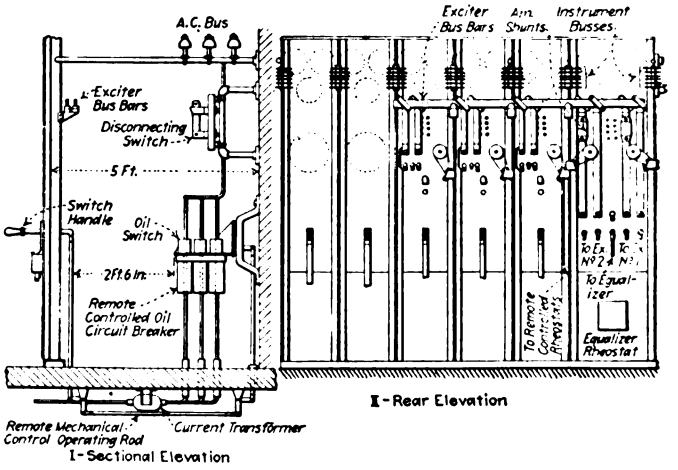

Fig. 35—Rear View and Sectional Elevation of Remote-Control Switchboard Mechanically Operated

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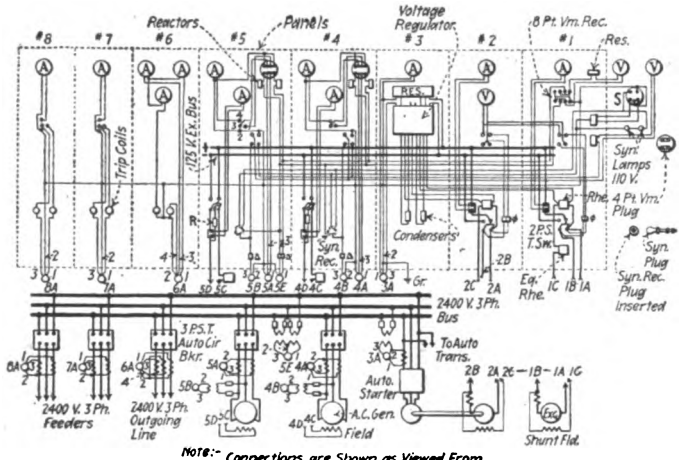


Fig. 36—Wiring Diagram for a Typical Mechanical-Remote-Control Switchboard

sible and high voltages kept away from certain floors, or certain rooms by locating the remote-control structure properly. (8) Where a wall is used for supporting the apparatus, the cost of the complete outfit may be reduced to very near that of the self-contained type of board, and, in some cases of very heavy capacities at low voltages, may be less in cost. Moreover, accessible arrangements of apparatus with ample spacings may easily be obtained. (9) Where a steel or masonry structure is used, access may be had to either side of the structure and an arrangement of this kind will satisfactorily accommodate the maximum amount of apparatus ordinarily used for either single or double-throw arrangements.

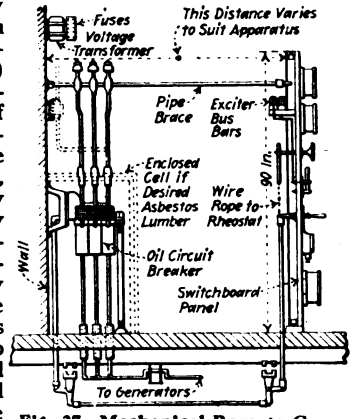


Fig. 37—Mechanical Remote-Control Circuit-Breaker Mounted on Wall

An alternating-current mechanical remote-control switchboard is shown in Figs. 33, 34 and 35. A wiring diagram is given in Fig. 36. Boards of this general design are suitable for applications for voltages not exceeding 35,000 and capacities not exceeding 25,000 kva. three-phase.* It should be noted that all of the alternating-current control apparatus is supported on a structure independent of the switchboard panels. The

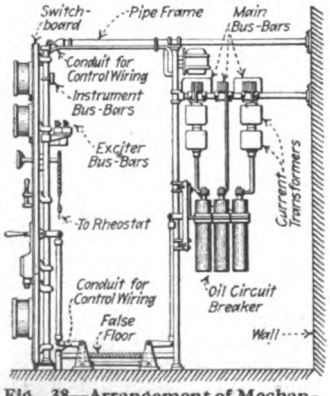


Fig. 38—Arrangement of Mechanical-Remote-Control Switchgear Utilizing Wall and a Pipe Frame for a Supporting Structure*

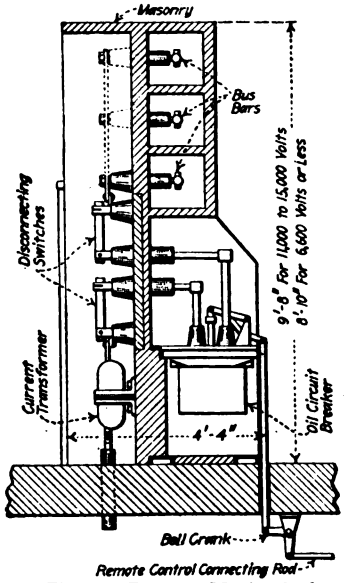
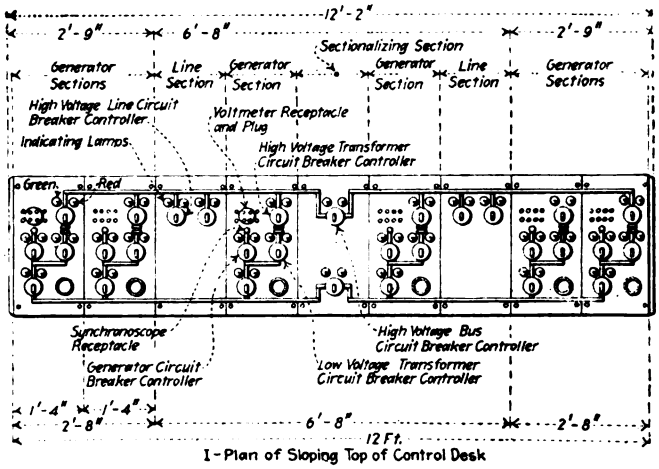


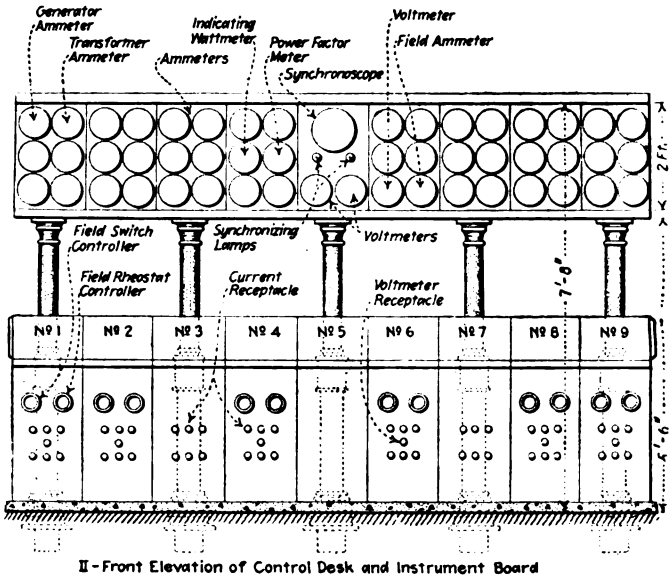
Fig. 39—Remote Mechanical Oil Circuit Breaker Arranged in Masonry Structure*

*C. H. Sanderson, "SWITCHBOARDS FOR ALTERNATING-CURRENT POWER STATIONS."

control equipment can, for relatively-low voltages, be supported on a wall directly back of the switchboard proper, as shown in



I - Plan of Sloping Top of Control Desk



II - Front Elevation of Control Desk and Instrument Board

Fig. 40—Plan of Face of Desk and Front Elevation of Control Desk and Instrument Board

Figs. 35 and 37. Or it can be carried on a specially designed pipe frame (Fig. 38) back of the board. Where the voltage is relatively high and the bus structure should, therefore, be located in rooms or chambers distant from the switchboard, the circuit-breakers can be mounted in a masonry structure as suggested in Fig. 39.

Electrical remote-control switchboards are ordinarily used only in the largest and most important installations. The small switches which control the operation of the large oil power switches may be mounted on a panel switchboard on a control pedestal (Fig. 4) or on a control desk (Figs. 2 and 40). The instruments are mounted on the

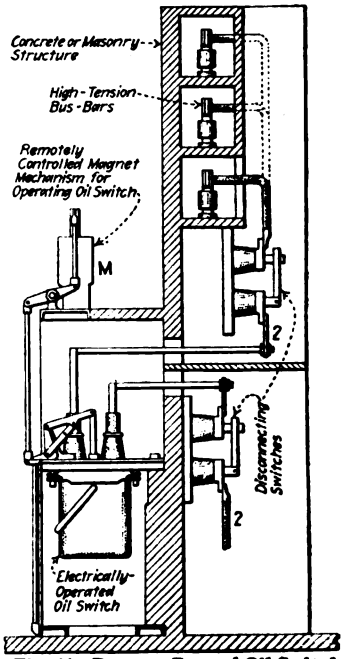


Fig. 41—Remote Control Oil Switch in Masonry-Cell Mounting

*C. H. Sanderson in "SWITCHBOARDS FOR A. C. POWER STATIONS."

(continued on page twenty-nine)

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EMPLOYERS
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Do You Need

AN EXECUTIVE, SALESMAN, SUPERINTENDENT, ENGINEER OR OTHER EMPLOYE?

WE PUBLISH below a list of more than 300 applications now on file with our Employment Bureau, giving the number under each classification and a limited statement of the specifications. Among these you will surely find the man to fill the place you have open. Let us know your requirements, and we will take pleasure in putting the applicants in touch with you promptly. Address The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

CLASSIFICATION	No. on File	Age	Qualifications	Experience	Salary Wanted	Location
Advertising Managers	3	23–29	H. S.-College	2–8 yrs.	$150–250	Anywhere.
Bookkeepers	3	26–31	High School	5–14 yrs.	$65–100	Anywhere.
Central Station Engineers	5	29–45	H. S.-Univ.	6–18 yrs.	$60–200	Anywhere.
Clerical	7	22–47	High School	2–10 yrs.	$65–125	Anywhere.
Commercial Laboratory Workers	1	29	Tech. School	11 yrs.	.....	Anywhere.
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Estimators	2	34–35	Practical	9–18 yrs.	$125–160	Anywhere.
Fixture Men	2	26–28	Practical	10 yrs.	$140	Anywhere.
Foremen	4	27–31	Practical	7–14 yrs.	$125–160	Anywhere.
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Illuminating Engineers	2	26–31	Univ	5–7 yrs.	$100–200	Anywhere.
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Maintenance Men	1	26	High School	6 yrs.	.....	Anywhere.
Managers, Commercial Department	1	43	Practical	12 yrs.	$200	Anywhere.
Managers, Contracting	1	26	College	5 yrs.	$125	Anywhere.
Managers, Jobbing House	2	32	College	13 yrs.	$2,400-10,000	Anywhere.
Managers, Office	3	26–32	High School	10 yrs.	$200	Anywhere.
Managers, Plant	21	25–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere.
Managers, Store	1	29	Univ.	10 yrs.	$125	West.
Managers, Railway	1	39	Practical	4 yrs.	$200	Anywhere.
Managers, Traffic	1	37	Practical	15 yrs.	$200	Anywhere.
Manufacturers Representatives	13	30–46	Practical-Tech.	9–20 yrs.	Com.–$300	Anywhere.
Mechanical Engineers	1	40	Univ.	.....	$200	St. Louis.
Meter Testers	2	28–34	Grade-College	8–16 yrs.	$100	Anywhere.
New Business Managers	4	29–34	H. S.-Univ.	9–15 yrs.	$100–200	Anywhere.
Office Executives	10	25–40	Grade-Univ.	4–18 yrs.	$80–200	Anywhere.
Power Salesmen	2	25–36	Tech. Grad	5–12 yrs.	$90–200	Anywhere.
Purchasing Agent	10	24–41	Grade-Tech.	4–21 yrs.	$80–200	Anywhere.
Sales Engineers	9	25–41	College-Univ.	4–11 yrs.	$100–200	Anywhere.
Sales Managers	12	28–45	H. S.-Univ.	4–17 yrs.	$150–417	Anywhere.
Salesmen	74	22–55	H. S.-Univ.	2–25 yrs.	$75–200	Anywhere.
Store Keepers	1	33	Practical	10 yrs.	$150	Anywhere.
Superintendents	25	26–46	H. S.-Univ.	3–15 yrs.	$100–500	Anywhere.
Supervisors Lighting	1	25	Technical	7 yrs.	$100	East.
Telephone Engineers	2	24–28	H. S.-Tech.	5–7 yrs.	.....	Anywhere.
Testing Engineers	1	24	Technical	2 yrs.	$100	Anywhere.
Wiremen	2	23–30	High School	7–17 yrs.	$75–125	Anywhere.

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JOVIANS!

Can You Use Any of These Jobs?

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, are seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau. A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of any of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

160. Salesmen. Three men, familiar with electrical supplies and machinery, needed by Philadelphia concern.

161. Sales Engineer. Chicago concern can use one or more capable men.

163. Bookkeeper. Ohio contracting house has a place for a fellow Jovian.

164. Salesmen. New England concern wants men for western Massachusetts, Maine and eastern Massachusetts territory; commission basis. Will consider only men capable of earning $75 to $100 per week.

165. Lighting Fixture Salesmen. Man capable of handling big business can find good opening with Omaha concern.

166. Salesmen—Tool Steel. New York tool steel manufacturer needs experienced men to cover Ohio, Pennsylvania, Texas and Florida.

167. Salesman. An eastern metal alloy house will open a branch in Detroit, and can use a high class man, familiar with electrical products.

168. Salesman. Chicago jobbing and wire house has opening for capable electrical salesman.

169. Operating Engineer. $110.00 and board to install refrigerating machinery.

170. Draftsman-Salesman. Chicago electrical supply house can use a combination man familiar with switch and panel boards.

172. Electrician. $90 to $120 offered by a northern manufacturing concern for all-around shop man, familiar with A. C. and D. C. windings.

173. Salesman. Indiana territory; to sell storage batteries to garages and dealers. Electrical engineering knowledge desirable. Permanent position, if satisfactory.

174. Armature Winders—Repair Men. Kansas City engineering concern wants competent men in machine repair department.

175. Central Station Engineers. $80 to $100 for 12-hour night shift, by northern public utility concern.

176. Bookkeepers. Two men wanted for western plants; experience in light or railway offices necessary.

177. Salesmen. New York electrical house, handling heavy supplies, wants men capable of developing large earning capacity, for Philadelphia, Washington, Boston and New York.

179. Manager—Storekeeper. Man for each position wanted by New York, large supply house.

180. General Office Man. Opening with New York lamp manufacturer, for man who can develop into salesman or better.

181. Sales Clerk. $75 to start in supply division of large electrical manufacturing concern.

182. City Salesman. Man wanted by Detroit firm. Must understand general electrical supplies.

183. Draftsmen. Massachusetts opening with large electrical manufacturer.

184. Sign Salesman. Generous offer to man able to get results.

185. Sales Representative. Attractive New England opening for first-class man who can develop territory.

186. Draftsman. A1 opportunity for man able to take charge of department of an engineering school.

187. Salesman. Central Iowa wholesale electrical supply house has attractive proposition for capable man.

188. Stock Clerk. Ambitious young man with electrical experience can place himself to advantage with Iowa supply house.

189. Electrical Engineers
Purchasing Agents
Sales Engineers
Sales Managers
Government places open for capable men over thirty years of age. Further particulars on request.

190. Sales Engineer. Attractive opening in office of large eastern motor manufacturer.

191. Traveling Salesman. Man familiar with selling passenger and freight elevators needed by Ohio Valley concern.

192. Salesmen. Two openings with St. Louis electrical manufacturer; transformer men wanted.

193. Superintendent. Indiana public utility has opening in town of 4000.

194. Superintendent. Electrical engineer wanted to take charge of a healthy, growing, lighting and transportation concern; town of 40,000.

195. Draftsman. South Carolina public utility wants man not subject to draft.

196. Central Station Engineers. Mississippi traction company can use several capable men.

197. Bookkeeper. Large eastern electric manufacturing company wants man with experience; familiar with correspondence.

198. Bookkeeper—Office Manager. Combination position open with Missouri Valley jobber.

199. Salesman. Western Missouri electrical supply house has road position open for immediate candidate.

201. Draftsmen. Experienced men wanted by Ohio electrical manufacturer.

202. Meter Testers. Western New York power company needs experienced men.

203. Salesman. Tennessee supply house can use several capable men on road.

204. Salesman—Estimator. Combination man, familiar with panel and switchboard construction, wanted by New York manufacturer.

205. Order Clerk. Attractive opening with Chicago concern, with chance of advancement.

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Winona, Minn.—WINONA	.....	.....

January Rejuvenations

(continued from page twenty)

H. C. Sterling, Po. 11014, presided as toastmaster of the banquet.

A committee consisting of Frank Shinner, Po. 11193V, R. E. Swift (new member), and Harry C. Sterling, Po. 11014, was appointed to draft by-laws and report at the next meeting of the members to be held January 30.

At the meeting of January 30, A. J. Purinton, Po. 9643V, was elected president of the League; H. C. Stockinger, vice-president and H. C. Sterling, Po. 11014, secretary-treasurer.

The following executive committee was appointed: Frank Shinner, Po. 11193V; J. Howard Blackman, William Bach, Jr., Po. 14194, and C. B. Smith.

The prospects of increasing the membership in the near future are exceptionally good, and the officers and members of the newly formed League are very enthusiastic.

Practical Lessons in Electricity

(continued from page twenty-four)

upper part of the board where a panel switchboard is used or on an instrument pedestal (Fig. 5) where a control pedestal is utilized. With a control desk, the instruments may be mounted on posts (Figs. 2 and 40), or on a vertical upward extension of the control desk. As above suggested, on the face of the control desk is arranged a miniature bus structure. The operation of the small switches on the switchboard permits current to flow through the magnet *M*, Fig. 41, of the electrically-operated remote-control oil switches, whereby they may be opened or closed at the will of the operator. In general, no two electrically operated remote-control boards are alike because each is usually designed to satisfy certain specified conditions of operation. The possible variations in design are almost endless, hence, cannot be considered here.

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*Care J. F. Buchanan & Company, Philadelphia

FIFTH DISTRICT
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345 Federal Park Place, Fort Wayne, Indiana

THIRTEENTH DISTRICT
RICHARD F. BEHAN, Po. 9315,
Care Westinghouse Electric & Manufacturing Co., San Francisco, Cal.

SIXTH DISTRICT
GEORGE E. WATTS, Po. 12482
Care Electric Service Supplies Co., Atlanta, Ga.

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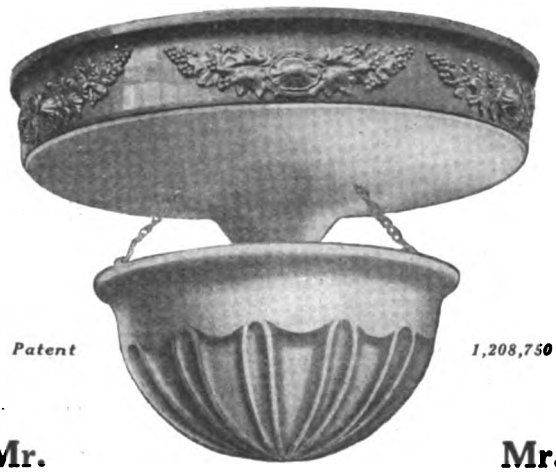

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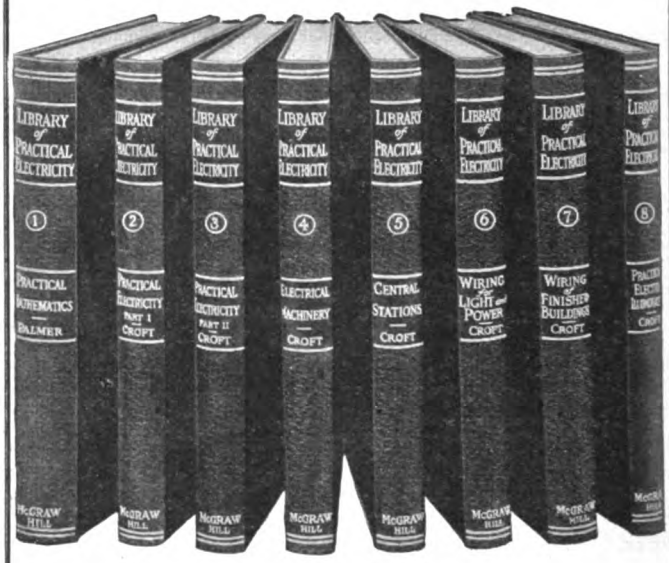

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Jov. Feb. '18

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THE JOVIAN

Volume Twelve | MARCH, 1918 | Number Four

THRIFT STAMP CAMPAIGN SUGGESTIONS

Sent to The JOVIAN by M. A. Oberlander, Po. 2520

1. Every man should endeavor to get **as many** Thrift Cards started as possible.

2. Don't get the idea that people **can't** buy Government Thrift Stamps and War Savings Stamps, for the man, the woman or child with little means **can** do so.

3. Urge every employer of labor, whether large or small, to enclose in the first possible week's pay-envelope, one United States Government Thrift Card with one 25-cent Stamp pasted in the proper space and enclose with it a letter telling the employe that **it is given with the employer's compliments, free of charge, and that he must help the country win the war by saving as many stamps as possible.**

4. Let every man who employs labor carry in his pocket three or four Thrift Cards, with a stamp pasted on each, so that he can **start a person quickly,** if the person be willing to start.

5. Let every person and concern in the electrical business apply their efforts.

6. Let every concern have their cashiers in all stores and departments carry an ample supply of War Savings Stamps and War Savings Certificates on hand, after the agency is taken out; make it a point **never to let the supply of stamps or certificates run out.**

7. Be sure that $5.00 War Savings **Certificates and folders** are on hand, so that no one will have to be told that they must go to postoffice or bank to exchange their Thrift Cards for Certificates.

8. Let every department head, where possible, carry a supply of Stamps and Certificates, so that it will be easy for the man, woman or child who wants to buy—**to buy at once.**

9. Have cashiers in all stores and offices ask customers to take **part** change in War Savings Stamps, when goods are bought or bills are paid.

10. Whenever you buy goods yourself for cash, tell the man to whom you give your money, that **you will be glad to take a few stamps, instead of cash in change;** this will bring out to the man from whom you buy goods the desirability of **making the offer to other customers.**

11. Every time an organization you belong to holds a meeting, see that someone on hand has a **supply** of Thrift Cards with at least one 25-cent stamp pasted on each, so that everybody present can be urged to invest and start another card.

12. When you tip a waiter or a Pullman porter or a man of that sort, make it a point at times to make the man take a 25-cent stamp pasted in a Thrift Card; of course, it is not fair to do all tipping with Thrift Stamps, but a certain proportion of tipping can be handled in this way, without hardship to the men to whom the tip is given.

13. Every time a man wants a drink or a cigar that he does not really require, let him take out a Thrift Card and stick a 25-cent stamp on it; he will feel better than if he had had the drink or the cigar, that is, if he is a good American.

14. Obtain envelope stickers on War Savings Stamps and send this advertising matter out in all your mail; don't confine your advertising to your own business—advertise the Thrift Stamp a good part of the time.

15. Put in every pay-envelope, when you pay off your people each week, some literature on War Savings Stamps, so that your employes **never forget the necessity for saving and filling up their books.**

16. Urge everyone who has a store or an office (and if you have one, do it yourself) to show the War Savings display cards very **conspicuously in every window** and see that they are on sale in that place.

17. Urge every man in the electrical business or any line of business who operates delivery wagons, to display on their trucks and delivery wagons, War Savings Stamp posters, the same as the express companies have carried on their wagons, Red Cross posters for several months past.

18. Urge every association or club that you belong to, or concern that you are with or own, to give prizes in the shape of War Savings Stamps or Certificates, **instead of in money.**

19. Don't forget that the department store is always willing to give a woman trading stamps pasted in her book to start a new book with, for the department store **knows** that once a book is started, it is nothing but human for the person starting it to keep adding to it and fill the book with stamps—when with one 25-cent stamp pasted in it, **you can count on the same thing being done that the department store has found is done, i. e., that the person who gets the book with one stamp in it will fill the book.**

20. Don't forget that if every person in the United States would buy just **one 25-cent stamp a day** the entire expense of the United States Government in prosecuting the war would be taken care of daily.

21. **Last, but not least, remember that the only way the country can win this war, is to save, and that the only way that a great many people of ordinary means save is by having a means at hand to save easily when they have 25 cents to spare.**

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

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SIXTEENTH JOVIAN CONGRESS

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District 1—William R. Phipps, Po. 10676, Neptune, Galveston, Texas.
District 2—Joseph Insull, Po. 16729, Mars, Pittsfield, Mass.
District 3—Harry W. Alexander, Po. 17191, Vulcan, New York City.
District 4—Arthur G. Pierce, Po. 2896, Pluto, Pittsburgh, Pa.
District 5—T. J. Creaghead, Po. 3013, Triton, Cincinnati, Ohio.
District 6—Julien Binford, Jr., Po. 1174V, Avrenim, Atlanta, Ga.
District 7—W. R. Power, Po. 2784, Apollo, Huntington, W. Va.
District 8—Galen Crow, Po. 925, Hercules, Guthrie, Okla.
District 9—L. O. Ripley, Po. 7042V, Ajax, Wichita, Kan.
District 10—Henry N. Remington, Po. 678V, Argus, Peoria, Ill.
District 11—William T. Wallace, Po. 1716, Amphion, Boise, Idaho.
District 12—H. L. Woolfenden, Po. 1062V, Atlas, Denver, Colo.
District 13—J. N. Colkitt, Po. 2627, Comus, Los Angeles, Cal.
District 14—P. T. Davies, Po. 8818, Chiron, Montreal, Can.
District 15—George L. Guy, Po. 4727 Cadmus, Winnipeg, Man.

Ell C. Bennett, Po. 3932-13V, Mercury, St. Louis, Mo.
In Charge of Central Offices.

PAST JUPITERS' ASSOCIATION, 1916-17

President

C. W. HOBSON, Po. 1
Past Jupiter One, Dallas, Texas.

Vice-President

W. E. ROBERTSON, Po. 424-6V
Past Jupiter Six, Buffalo, N. Y.

Secretary-Treasurer

J. ROBERT CROUSE, Po 260-8V
Past Jupiter Seven, Cleveland, Ohio

H. F. MacGREGOR, Po. 21
Past Jupiter Two, Houston, Texas.

S. A. HOBSON, Po. 3V
Past Jupiter Three, Chicago, Ill.

C. A. NEWNING, Po 2V
Past Jupiter Four, Houston, Texas

H. B. KIRKLAND, Po. 285-5
Past Jupiter Five, Pittsburgh, Pa.

OSCAR C. TURNER, Po. 333-3V
Past Jupiter Eight, Chicago, Ill.

J. FRANK DOSTAL, Po. 1102V
Past Jupiter Nine, Colorado Springs, Colo.

ROBERT L. JAYNES, Po. 1421-50
Past Jupiter Ten, Massaponax, Va.

FRANK E. WATTS, Po 1509-47
Past Jupiter Eleven, New York City.

W N. MATTHEWS, Po. 496-44V
Past Jupiter Twelve, St. Louis, Mo.

HOMER E. NIESZ, Po 306V
Past Jupiter Thirteen, Chicago, Ill.

THOS. A. WYNNE, Po. 11457V
Past Jupiter Fourteen, Indianapolis, Ind.

HENRY L. DOHERTY, Po. 3208-33
Past Jupiter Fifteen, New York City.

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THE PRICE AND VALUE OF REAL JOVIANISM

WHEN the cost of co-operation and the dividends the application of its tenets will bring to the industry can be reduced to a valuation in money, then will the business men of the electrical industry be in a position to estimate the cost and value of Jovianism in dollars and cents.

If you look upon Jovianism as a dollars and cents proposition your vision is not projected at an angle sufficiently high to enable you to conceive its value. Jovianism is not a dollars-and-cents machine. It does not deal with the material things of traffic and industry. It deals more with the human element that controls traffic and industry.

When you attempt to make a ledger charge of the cost of Jovianism you should credit a friendship account, an acquaintance account, a co-operation account, a good-fellowship account and a human element account. We prize these things but we do not always attempt to estimate the value of them.

All of these accounts (if we should call them such) are subsidiary accounts to Jovianism. That is, Jovianism adds to the production of these accounts. It promotes acquaintanceship, friendship, good-fellowship, and out of these it generates the spirit of co-operation and harmony.

Consequently, the return on Jovianism proper is indirect, but if you have formed friendships and acquaintances and have been induced to co-operate in constructive movements through its influence the value of your membership must be manifest to you even if this value does not come in the form of a remittance or an order for goods through the Jovian Central Office.

Thousands of agreeable acquaintances have been formed through Jovianism that have proved beneficial both from a standpoint of business and one of friendship. Disputes have been settled, antagonistic feelings have been removed by the service it performs. It has brought about concerted action in numerous ways that must have made money or saved money for those interests it has harmonized or influenced to co-operate, but until some rule is devised to reduce the material to the spiritual, or vice versa it is hard to understand how anyone believes the exact value of these benefits in **money** should be ascertained.

The ethical side of Jovianism, the foundation upon which its stability as an organization must be based, includes higher principles that must be understood to produce loyalty that is willing to sacrifice for the Order's promotion and advancement.

There is nothing in these tenets to prohibit the use of the co-operative power of Jovianism to produce material benefits for the membership and this may be accomplished in a number of ways, but the facts are in evidence to show that the greatest value of Jovianism lies in direct returns from its "humanizing" powers.

While these are perhaps harder of quick comprehension, once understood they form a more stable binder than benefits bearing only the material aspects.

* * * *

THINGS THAT EVERY JOVIAN SHOULD REMEMBER

THERE are a number of things connected with the Order that Jovians should bear in mind at all times. Among these are the following:

That a larger membership is needed to make the Order more effective.

That there are thousands of men not Jovians, engaged in the electrical industry who are eligible and desirable as members.

That boosting the Order will have an influence in making those men want to affiliate with it.

That the reduction of the initiation fee from $10 to $5 will be the persuading factor to a number of men who have long contemplated joining.

That Jovian accident and health insurance policies are saving Jovians much more than their dues each year, and that this insur-

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ance is not punctured with exceptions and weakened with limitations.

That the organization of a Chartered Jovian League means a saving of one half of the Jovian dues for local purposes.

That the organization of Chartered Jovian Leagues will bind the organization more closely together, and develop its power of co-operation.

That a large number of members have been placed in positions and a number of firms have been aided in securing competent help through The Jovian Employment Bureau.

That aside from all of these material things, The Jovian Order is founded on the principles of good-fellowship, and co-operation, and that application of these tenets is bringing men together in a spirit of harmony, performing the function of extending acquaintanceship and promoting the interests of its members in numerous ways.

That the Jovian Order must look to its members—to their loyal co-operative efforts for its growth.

That if you as a loyal member of the Order will remember the principles for which the Order stands, the benefits it is producing for its members, and the still greater benefits it can produce with a larger membership, and be ready to give the information to your friends and acquaintances you will be contributing a real help to the cause of Jovianism that is bound to make the Order a bigger and better one, and a more helpful one for you.

* * * *

PORTABLE ELECTRIC TOOL ASSOCIATION

THE ORGANIZATION of the "Portable Electric Tool Association" took place at Indianapolis, Ind., January 11 and 12. The organization was effected with fourteen members.

Although the new organization follows very closely the by-laws and constituion of the Electric Power Club, there is no conflict between the aims and purposes of the two associations, as the Portable Electric Tool Association will confine itself solely to tool problems.

The aims and purposes of the new association as stated are: "First, discussion of subjects of interest and value to its members. Second, advancement and improvement of the portable-tool industry. Third, collection and dissemination of statistics. Fourth, standardization of design, manufacture and application of portable electric tools."

The following officers were elected: President, Walter Friedlander; vice-president, F. Schneider; treasurer, Jas. Clark, Jr., Po. 258V; secretary, R. S. Cooper.

* * * *

A LETTER FROM FRANCE

Co. A, 166th Inf.
A. E. F. France, Feb. 10, 1918.

JOVIAN ORDER, ST. LOUIS, MO.:

Gentlemen:—Received your letter of November 30, stating that my dues would not be held against me while I am here on French soil under the flag. Thanks a thousand times for putting my name on the Honor Roll. Here's hoping I won't disgrace it.

I am so busy these days pushing "All the time for everything American" that I haven't had the chance of looking around to find out whether my brothers in arms are partly Jovians. No doubt there are plenty of them in the service now.

To those who haven't come over as yet I can give them warning that everything is not sunshine, but it is quite worth while to be here and know that our army is getting the training for our coming work.

Yours in Jovianism,
CHARLES Z. HENKLE, Po. 10928,
First Lieut., Co. A, 166th Inf.

NOTE—Lieutenant Henkle was connected with Counselman & Company, Chicago, before his enlistment.—Ed.

WM. R. PHIPPS, Po. 10676, Sixteenth Neptune, who holds the reins over the Jovian Dominion of Texas. Congressman Phipps' headquarters are at Galveston, where he holds the position of General Manager of the Brush Electric Company.

J. E. McCLEARNON ELECTED TO HEAD NEW YORK CITY JOBBERS

AT THE second annual meeting of the New York Electric Club, February 6, officers were elected for the ensuing year, a new constitution and by-laws were adopted, and plans were discussed for the coming year's work.

The membership of the club comprises nearly all electric jobbers of New York City. Its object is as set forth in its constitution, "The advancement of the social, professional and commercial interests of its members, the elevation of the standard of electrical work, a furtherance of the use of electricity and the general development of the electrical industry."

The following officers and directors were elected: President, J. E. McClernon, Po. 5383; vice-president, Charles E. Bins; secretary-treasurer, W. J. Krieger; executive committee, J. J. Hartt, G. P. La Shelle, J. H. Hughes, Po. 4233; J. H. Owen, M. Zucker and L. D. Bailey.

* * * *

A NATIONAL DUTY

THE TREASURY of the United States has a great deal of money to raise and it can not be raised by bankers alone, says Secretary McAdoo. The banks of this country cannot alone sustain America's needs in this war and extend to our allies the essential aid which they must have to continue the war.

The rich of this country cannot do it alone; the men of this country cannot do it alone; the women of this country cannot do it alone; but all of us, the people of the United States, disregarding partisanship, forgetting selfish interests, thinking only of the supremacy of right and determined to vindicate the majesty of American ideals and secure the safety of America and civilization, can do the great and splendid work which God has called upon us to do.

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PERSONAL POINTERS

"And some are in the churchyard laid,"
So said in rhyme the little maid,
Who claimed that some had gone to heaven,
Yet argued that there still were seven.
Acquaintances and friends may go
To lands remote, but still we know
Within our hearts each holds a place
That absence never may erase.

* * * *

EDWARD A. BULLIS, Po. 18926, has severed his connection with the Federal Sign System (Electric) of San Francisco to become associated with the Electric Company of Philadelphia.

A. J. PURINTON, Po. 9643V, First Tribune, President of the Atlantic City League. The 26 candidates initiated in January brought the membership up to league strength, and when the charter was applied for Jovian Purinton was chosen president.

* * * *

GUY R. HASTINGS, Po. 18762, formerly sales engineer for the National X-Ray Reflector Company, Chicago, Ill., has been made manager of sales of the Chicago office of that company.

* * * *

MILTON RUPERT, Po. 8394, formerly assistant to the president of the R. D. Nuttall Company of Pittsburgh, Pa., has been appointed vice-president and assistant treasurer of that company.

* * * *

W. PORTER JONES, Po. 19424, has resigned his position as manager of the Oklahoma Gas & Electric Company, Norman, Okla. He has been manager of the company for about a year, having been promoted from the position of new business manager.

* * * *

FRANK E. WATTS, Po. 1509-47, Past Jupiter Eleven, district manager of the Hart Manufacturing Company, New York City, met with a serious accident on February 13. He slipped on an icy pavement and broke his leg about four inches above the ankle.

H. A. COWGILL, Po. 13850, formerly engineer for the St. Joseph Railway, Light, Heat & Power Company, has been appointed general superintendent for the Mansfield (Ohio) Electric Light & Power Company, a Henry L. Doherty & Company property.

* * * *

THOMAS E. GRIFFIN, Po. 5230, formerly superintendent of the mechanical department of the Dispatch Publishing Company of Pittsburgh, Pa., has been elected treasurer and general manager of the Dickinson Manufacturing Company, Springfield, Mass.

* * * *

J. P. PULLIAM, Po. 14003, has been appointed general manager of the Wisconsin properties of the Wisconsin Securities Company, with headquarters at Green Bay, Wis. He was formerly connected with the Eastern Wisconsin Railway & Light Company.

* * * *

JAMES W. MOREY, Po. 2781, until recently manager of the New York branch of the Multi-Refillable Fuse Company, has joined the staff of Hatheway & Knott, Inc., 120 Liberty Street, New York, and will travel the southern territory of Pennsylvania.

* * * *

LOUIS A. FERGUSON, Po. 12249, vice-president of the Commonwealth Edison Company, Chicago, has been appointed a member of the auxiliary committee of the Capital Issues Committee for the Chicago Federal Reserve District.

* * * *

A. J. GATES, Po. 5620, is now connected with the Baker, Rauch & Lang Company, of Cleveland, Ohio, handling the sale of industrial trucks. Jovian Gates was formerly with the sales department of the General Electric Company.

* * * *

V. C. GILPIN, Po. 452, vice-president of the Triangle Conduit Company, Inc., Brooklyn, N. Y., announces the appointment of a new selling agent at Boston, Alva D. Stein, with headquarters at 156 Purchase Street.

* * * *

F. W. LESTER, Po. 7283, of the Electrical Construction and Sales Company of Cleveland, left that city on January 23, to accept a position on the Imperial Munitions Board, with headquarters at Toronto, Canada.

* * * *

A. PATTERSON, Po. 13916, electrical superintendent of the Southwestern Gas & Electric Company, Texarkana, Ark., has been appointed engineer and engineer of overhead construction of the company.

* * * *

W. W. FRY, Po. 2160, formerly with the Southern Public Utilities Company, Sanford, Fla., is now with the Daytonia Public Service Company, Daytonia, Fla., in charge of its distribution department.

* * * *

JAMES M. GILCHRIST, Po. 6996, was recently elected secretary-treasurer of the Federal Sign System (Electric). He succeeds JOHN F. GILCHRIST, Po. 3219-34, who was elected president of the company.

* * * *

H. W. STORTZ, Po. 16450, has resigned his position with the Edison Storage Battery Company, Orange, N. J., to accept the appointment of vice-president and general sales manager of the Swartz Electric Company, Indianapolis, Ind. Jovian Stortz was manager of sales of various departments with the Edison company.

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FRANK W. HALL, Po. 3520, was recently appointed commercial manager of the Sprague Works of the General Electric Company. Jovian Hall has been connected with the Sprague Electric Works continuously for twenty-two years. He has held the position of sales manager for the company for the past three years.

* * * *

R. P. HARTENSTEIN, Po. 17427, who for some years has been connected with the sales and manufacturing departments of the Federal Sign System (Electric), Chicago, will establish an agency for electrical or electrical-mechanical devices of merit. His headquarters are at present at 4539 North Whipple Street.

* * * *

LOYALL A. OSBORNE, Po. 3235-36, vice-president of the Westinghouse Electric & Manufacturing Company, of New York City, chairman of the executive committee of the National Conference Board, has been appointed a member of a committee on industrial peace during the war by the Secretary of Labor.

* * * *

W. B. MISER, Po. 8941, manager of the Oklahoma Gas & Electric Company, at Drumright, Okla., has been appointed chairman of the Drumright Military Training Camp Association. The object of the association is to secure competent men for inspection of equipment for the division signal corps.

* * * *

H. O. CLARK, JR., Po. 6629, commercial manager of the Houston Lighting & Power Company, has been appointed by the government to assist the local aviation construction and field officers in an advisory capacity on problems concerning electrical installations at the army cantonment.

* * * *

JAMES B. OLSON, Po. 307, has resigned as assistant secretary and general sales manager of the Harbishaw Electric Cable Company, New York. It is Jovian Olson's intention to continue in the insulated wire and cable business, but definite announcement of his plans for the future have not been made. He now has his headquarters at the Hotel Chatelaine, Bedford Avenue, Brooklyn.

* * * *

SAMUEL SCOVIL, Po. 2400-30, president of the Cleveland Electric Illuminating Company, has resigned to enter the employ of the government as representative of the Cleveland district of the Federal Ordnance Department. Jovian Scovil has been president of the company for four years. He is third vice-president of the National Electric Light Association.

* * * *

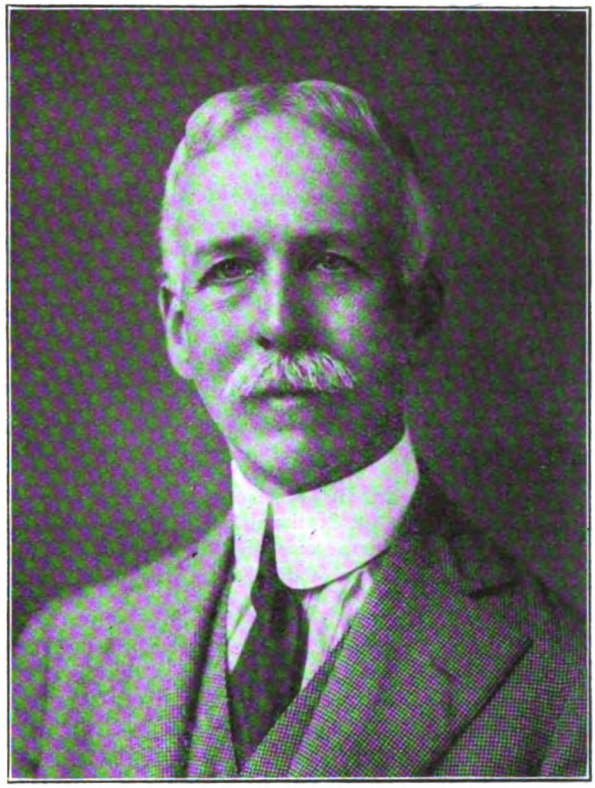
H. W. COURVILLE, Po. 13954, superintendent of power distribution for the Consumers' Power Company, Jackson, Mich., has been promoted to the position of general superintendent of distribution in the Flint (Mich.) district. Before going with the Consumers' Power Company in 1912, Jovian Courville was connected with the Butte Electric Power Company.

* * * *

JOHN W. KELLY, Po. 3704, electrical chief of the city of Camden, N. J., entertained in that city on January 26 the electrical chiefs from a number of other cities, members of the Association of Municipal Electrical Workers. The object of the conference was to consider what the municipal electricians could do to safeguard the cities under their control.

* * * *

P. T. PHILIPS, Po. 16742, engineer, superintendent of distribution of the Little Rock (Ark.) Railway & Electric Company, has been appointed general superintendent of the company and given full authority over the power house operation. His appointment is incidental to the merging of the heating business with the other departments.



H. K. MILLER, Po. 20028, President of the Wilmington, Del., Jovian League. The two Rejuvenations held in January placed Jovian Miller at the head of a League numbering 75 members.

DONALD MCDONALD, Po. 13317, vice-president and general manager of the Louisville (Ky.) Gas & Electric Company, has been elected vice-president of the Louisville Industrial Foundation. The organization has a million-dollar factory fund. It was promoted by the Louisville Board of Trade to bring new industries to the city.

* * * *

CHAS. C. SCHNEIDER, Po. 14860, manufacturers' agent at Detroit, Mich., has moved to larger quarters at 327 Broadway Market Building. He was formerly located at 329 Broadway Market Building. Jovian Schneider, who represents the Pittsburgh Lamp, Brass & Glass Company, has recently added to his line of transformers made by the Cumberland Electric Company of Memphis, Tenn.

* * * *

H. J. NEWBILL, Po. 16855, formerly district manager for the Stantonville Telephone Company, at Tupelo, Miss., has been promoted to the position of assistant to W. N. MCANGE, JR., Po. 16854, vice-president and general manager of the Allen Telephone Properties. Jovian Newbill will specialize in handling matters pertaining to traffic. He will continue to make his headquarters at Tupelo, Miss.

* * * *

TERRELL CROFT, Po. 13683, has joined the engineering staff of the Luminous Unit Company of St. Louis, as chief electrical engineer. Jovian Croft will continue his educational work, both with the classes he now has and the lessons he is publishing. For several years he has devoted his entire time to technical literary productions and his books, covering almost every phase of electrical production and operation, have reached a large sale, which is growing steadily.

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F. W. SMITH, Po. 1065, vice-president of the Union Electric Light & Power Company, New York City, was recently appointed chairman of the Gas & Electric Light, Heat and Power Group of the National War Savings Committee. Through his efforts at

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tractive posters have been produced and distributed and arrangements made for the distribution of other literature. One of the methods of his campaign will be the distribution of literature to the company's 1,800,000 customers with their gas and electric bills.

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B. E. Morrow, Po. 6503, manager of the production department of the Consumers' Power Company, Jackson, Mich., was recently elected a director of the National Safety Council. Jovian Morrow has always been an active advocate of safety work and the prevention of accidents. He has been a member of the committee on dangerous machinery, appointed by the New York City Department of Labor, a member of the committee on accident prevention of the National Electric Light Association and chairman of the safety practices committee of the Public Utilities Section of the National Safety Council.

* * * *

Leroy P. Sawyer, Po. 193, has taken up special work in the executive department of the National Lamp Works at Cleveland. He was formerly general manager of the Buckeye Electric Division of the National Lamp Works of the General Electric Company.

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N. H. Boynton, Po. 5604V, formerly publicity manager of the National Lamp Works of the General Electric Company of Cleveland has been promoted to the position of general manager of the Buckeye Electric Division of the National Lamp Works. Jovian Boynton is a graduate of the University of Illinois, class of '09, and has been connected with the engineering and publicity departments of the National Lamp Works since that time. He has been manager of the publicity department for the last six years.

* * * *

W. R. Abbott, Po. 17292, general manager of the Chicago Telephone Company, was recently elected a member of the board of directors of the Chicago Association of Commerce. Jovian Abbott has been general manager of the Chicago Telephone Company since 1914, and has been connected with the company since 1893, holding various positions, such as chief clerk to the general superintendent special agent in charge of rights of way and claims, superintendent of suburban divisions, etc. He is a member and officer in a large number of organizations, included among which are the Chicago Athletic Club, Industrial Club, Edgewater Country Club, Electric Club Jovian League and a number of others.

* * * *

W. W. Briggs, Po. 1288, has resigned as general agent of the Great Western Power Company at San Francisco, a position he has held since 1913, and is now manager of the New York division of the Westinghouse Lamp Company. Jovian Briggs was Pacific Coast manager for the Westinghouse Company previous to becoming affiliated with the Great Western Company. He has been connected with the lamp industry since 1886, at which time he entered the arc-lamp department of the California Electric Light Company.

* * * *

Charles H. Keeling, Po. 10018, has joined the selling forces of the Square D. Company, Detroit, Mich., which he will represent in Canada territory with headquarters at Toronto. Jovian Keeling was formerly connected with the Renfrew Electric Manufacturing Company, Ltd., Renfrew, Can.

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P. B. Zimmerman, Po. 7305V, has been appointed manager of the publicity department of the National Lamp Works of the General Electric Company, Cleveland, succeeding N. H. Boynton, Po. 5604, recently promoted to the position of general manager of Buckeye Electric Division of that company. Jovian Zimmerman has been connected with the publicity department of the National Lamp Works for several years.

CHARTERED
JOVIAN LEAGUES

Cincinnati	Charter	No. 1
Kansas City, Mo.	"	No. 2
Pittsburgh	"	No. 3
Minneapolis	"	No. 4
St. Joseph, Mo.	"	No. 5
Louisville, Ky.	"	No. 6
Stark County Jovian League (Comprising the towns of Massillon, Canton and Alliance, Ohio.)	"	No. 7
Tulsa, Okla.	"	No. 8
Eau Claire, Wis.	"	No. 9
Harrisburg, Pa.	"	No. 10
Wichita, Kan.	"	No. 11
Winnipeg, Man.	"	No. 12
Bay City, Mich.	"	No. 13
Milwaukee, Wis.	"	No. 14
Port Arthur, and Fort William, Ont.	"	No. 15
Oklahoma City	"	No. 16
Galveston, Texas	"	No. 17
Muskogee, Okla.	"	No. 18
Mansfield, Ohio (Comprising Richland and Ashland Counties)	"	No. 19
St. Louis	"	No. 20
Southwestern Michigan Jovian League (Benton Harbor, Michigan)	"	No. 21
Watertown (Wis.) Jovian League	"	No. 22
Akron (Ohio) Jovian League	"	No. 23
Wilmington (Del.) Jovian League	"	No. 24
Dallas Jovian League	"	No. 25
Columbus Jovian League	"	No. 26
Denver Jovian League	"	No. 27
New York Jovian League	"	No. 28
New Orleans Jovian League	"	No. 29
Houston Jovian League	"	No. 30
Atlantic City Jovian League	"	No. 31
Globe Jovian League	"	No. 32
Trenton Jovian League	"	No. 33

OBITUARY

F. W. Bertagnolli, Po. 4879, manager of the Gilpin County Light, Heat & Power Company, was electrocuted in the power house of the Evergreen Mine, Apex, Colo., January 24. He was engaged in reading a meter at the time and the current is supposed to have jumped to him. Jovian Bertagnolli was thirty-three years of age, and was just beginning to gain recognition for his services. A week prior to his death he had gone to Denver to offer to enlist in the aviation service. He had been a member of the Order since 1911, having been initiated at a Rejuvenation held in Denver in October of that year. A wife and three children survive him.

* * * *

William Clegg, Jr., Po. 10792, former manager of the St. Louis branch of the Westinghouse Electric & Manufacturing Company, and later district manager for the company with headquarters at St. Louis, died at his home in that city February 7, after an illness lasting about two years. Jovian Clegg, who was a graduate of Tulane College, entered the employ of the Westinghouse Company at its Denver branch in 1901, and was transferred to the management of the St. Louis branch in 1903. He was made district manager in 1904, and served in that capacity until, owing to ill health, he was transferred to East Pittsburgh in 1915. He had been a Jovian since 1913, having been Rejuvenated in May of that year.

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NEWS OF JOVIAN LEAGUES

St. Louis

Members of the St. Louis Jovian League attended a joint meeting with the Advertising Club at the Statler Hotel, February 5. Lieut. Shepard, of the Ordnance Department, and Mr. Older, a representative of the Good Roads Convention, were the speakers.

Harry W. Alexander, Po. 17191, Sixteenth Vulcan, publicity manager for the Society for Electrical Development, was the speaker of the day before the luncheon meeting of February 12. He gave a general review of business conditions of the country as he had found them on his recent trip, embodying in his address statistical facts that he had gathered from different sections of the country.

Fred Johnson, Po. 177V, Statesman-at-Large, sales manager, Wagner Electric Company, presided as chairman.

The luncheon meeting of February 19 proved to be the largest and most enthusiastic one of the year.

Major John R. Fordyce, engineer Reserve Corps, Constructing Quartermaster in charge of the construction of Camp Pike, delivered a lecture on "Building an Army Cantonment."

His lecture was illustrated by motion pictures of the work, taken by Jas. Stewart & Company, showing the rapidity with which the buildings were erected.

Within sixty-five days after the site for the cantonment was approved, it was ready to receive troops, who were taken care of as fast as they could be transported to it after that date. Sixteen hundred buildings were erected, streets graded, water and sewer system, and electric lighting system were installed.

One of the most remarkable feats connected with the construction of the cantonment was the building of twenty-six miles of railroad track to it by the Missouri Pacific Railroad Company, in twenty-five days. This road had to be graded a number of miles through rock a depth of twenty feet in places. Thirty days after it was started cars were being delivered over it at the rate of from thirty to one hundred a day.

In his address, Major Fordyce attributed the record achievement to both efficiency and the loyalty of the workers.

The General Electric Company had charge of the luncheon meeting of February 26, and reproduced a motion picture film entitled "The Benefactor," depicting the life of Thomas A. Edison.

Cliff R. Croninger, Po. 9624-60V, of the General Electric Company, presided as chairman.

This proved to be another splendid meeting, bringing out an unusually large attendance.

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Kansas City

H. P. Wright, president of the H. P. Wright Investment Company, was the speaker of the day at the meeting of the Kansas City League, January 25. Mr. Wright gave a splendid review of business conditions under the title "Outlook—Business, Present and Future."

February 22, Judge Joseph F. Kiernan, of the Southside Municipal Court, addressed the League meeting.

* * * *

Cleveland

Billy Evans, the American League umpire, pitched a few hot ones over for the Cleveland League fans at the luncheon meeting. He took for his subject "Baseball from Every Angle." Besides being an umpire Evans is a sport writer, and contributes to the sporting pages of the local papers.

Brigadier Withers, of the Salvation Army, made a short talk on "Fighting Salvationists." His subject covered the war work of the Salvation Army.

"Salesmanship and Censorship" was the subject of an address by C. C. Henderson, advertising manager of the Cleveland Twist Drill Company, February 7. Mr. Henderson asserted that "the war has not come home to us with sufficient reality to arouse the American people." He asserted, "We have assumed an attitude of indifference which can be aroused only by appealing to the emotions of the people."

J. S. HENRY, Po. 5994, First Tribune Winnipeg, Man. Jovian Henry officiated at a Rejuvenation January 31, at which 50 candidates were initiated.

Announcement was made of a smoker to be given by the League on the evening of February 11. Also that concerts would be given in the League rooms on Sunday evenings.

A challenge from the Electric Club bowlers of Detroit was delivered to the bowlers of the Cleveland League for a match to be held in Detroit February 23. J. A. Milner, Po. 5645, was assigned the task of selecting a team to accept the challenge.

J. Robert Crouse, Po. 260-8V, Past Jupiter Seven, made an urgent appeal for the buying of Thrift Stamps, February 14. Past Jupiter Crouse stated that the stamps would "accomplish two important results: provide money for the Government to prosecute the war successfully, and teach the nation a lesson in thrift."

Other speakers at the meeting were H. H. McKeehan, who emphasized the fact that the purchase of Thrift Stamps was a great savings opportunity, and Captain Macbeth, of the British Recruiting Station, who related a number of interesting incidents connected with his service abroad.

The speaker at the meeting of February 21 was Dr. Roger Perkins, who presented a vivid picture of Roumania as it exists today. He described how the nation was at one time endangered by an epidemic of typhus. "Today," said Dr. Perkins, "Roumania's army is in the best of condition, but the people are in great danger of famine because they are completely surrounded by nations at war with them."

Captain Erickson, of the Quartermaster Department, gave a short talk describing the difficulties in preparing the cantonments for the army the nation is raising.

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Winners of the Jovian Annual Bonspiel at Winnipeg: Left to right, top: J. Bloomer, Po. 5975; L. A. Eagleton, Po. 8971. Sitting: J. A. Gillespie, Po. 20437; W. G. Vogan, Po. 15974.

Chicago Charles R. Holden, vice-president of the Union Trust Company, was the speaker at the luncheon meeting of the League January 24, taking for his subject "War and Income Tax."

Among the visitors present was J. M. Bateman, Po. 2610V, former president of the Cleveland League, now of Detroit, who extended an invitation to the members to attend the meetings of the Detroit Electric Club when in that city.

In the absence of Secretary W. H. Hodge, H. A. Porter, Po. 1244, read the secretary's report of the progress made in 1917 and also the financial statement at the close of the year.

Mr. Lies, general superintendent of the United Charities, spoke concerning the necessity for holding the home lines as well as those in France.

W. R. Moss delivered a recitation, "Knee-Deep in June," which was a real hit.

"Long Heads and Round Heads," or "What is the Matter with Germany?" was the subject of an address delivered before the League January 31, by Dr. William S. Sadler.

This was one of the most thrilling and interesting talks heard by the members recently.

The proposed constitutional amendments were submitted to a vote of the members present and were passed by an unanimous vote.

The amendments cover the regulation of dues to the various kinds of membership of the club and the collection of contributions during meetings.

Horace J. Bridges spoke before the League February 7, on "Spiritual Gains of the War." While decrying the war in all of its aspects, he pointed out certain material gains which he believes economists will weigh against the costs and find that humanity is the gainer.

Mr. Hipes, of the Chicago branch of the Y. M. C. A., made a talk concerning the financial needs of that organization. The question of the League contributing to the Y. M. C. A. was referred to the board of managers.

Mme. Stanculeanu, widow of the late Professor Georg Stanculeanu, of the University of Nucaret, Roumania, held the sympathetic attention of a large audience at the meeting of the League February 14. She is continuing the work of arousing sympathy in the American people for her country, a work that her husband had undertaken and was following until the time of his death a few weeks after his arrival in this country.

February 21, Al Saunders told the members of the League about Billy Sunday, who will attempt to drive the devil out of Chicago within a few weeks. His address was "The Truth About Billy Sunday," and contained many interesting things about the evangelist.

Mr. Albert Moulaert, Counsel General for Belgium in the United States, was the speaker of the day at the meeting of February 28. He took for his subject, "Belgium."

* * * *

Harrisburg The Harrisburg Jovian League held its annual election meeting on the evening of January 17, and elected the following officers to preside for the ensuing year: President, Horace B. Pratt, Po. 6380; vice-president, James S. Thompson; secretary-treasurer, Carey P. Williams, Po. 18881. Considerable discussion was indulged in by the members with the object of outlinging plans for greater Jovian activity during the forthcoming year.

* * * *

Louisville The annual banquet and election of officers of the Louisville Jovian League was held at the Tyler Hotel on the evening of January 31. Two tickets were nominated; they were designated by the members as the "Regular Ticket" and the "Camouflage Ticket." The arrangement of the tickets permitted members to vote the tickets "straight" or "scratch." The following officers were elected: President, W. S. Clark, Po. 1220; vice-president, C. C. Childers, Po. 15494; secretary-treasurer, S. B. Storm, Po. 9781; directors, Paul Tafel, Po. 13337; Jas. Clark, Jr., Po. 258V; C. A. Klemm and I. Dreyfus, Po. 13294.

The election of officers was preceded by a banquet, following which addresses were made by the following speakers: E. W. Hines, state chairman, National Council of Defense; Jas. Richmond, of the Richmond Schools, and Frank Cassell, sales manager, Belknap Hardware & Manufacturing Company. Eighty-five members and twenty-two guests were in attendance.

* * * *

Winnipeg The annual Jovian Bonspiel was held the latter part of January. The main event was won by the Bloomer Rink, composed of J. A. Gillespie, L. A. Eagleton, Po. 8971, W. G. Vogan, Po. 15974, and J. Bloomer, Po. 5975, skip. The consolation was won by the Howard Rink, consisting of F. B. Kennedy, G. E. Langley, Po. 12862, G. L. Guy, Po. 4727, and R. F. Howard, Po. 15955, skip.

The presentation of prizes for these events formed part of the program of the Rejuvenation held on the evening of January 31.

At the luncheon meeting, held at the Fort Garry Hotel January 10, A. L. Struthers gave an interesting talk on "Business Psychology."

J. W. Macmillan, D.D., professor of social ethics at the Manitoba College, delivered a splendid address before the League, February 7, on the "Minimum Wage Question." Owing to the fact that the legislature now in session is considering this question the subject was a timely one.

The speaker of the day at the luncheon meeting of February 21 was Lieutenant-Colonel J. E. Hansford, whose address, "War-Time Incidents in England and France," was a review of his observations while at the front.

On March 1 the League started another tournament. A great deal of interest is being shown in this part of its social activities.

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Houston The Houston Jovian League held its first luncheon meeting as a chartered League, March 4, at the Rice Hotel, Mayor J. C. Hutcheson, Jr., was the speaker of the occasion. He embodied into his address congratulations to the members of the organization, and quoted extracts from the Bible and Shakespeare to show the value of light.

Sixty-six members were in attendance at the meeting and a great deal of enthusiasm was in evidence.

The purposes of the League were clearly outlined in the new Constitution that was adopted, and embody the promotion of sociability and goodfellowship among its members, and the advancement of the industry by promoting the use of electricity.

The territorial limits of the League were also outlined and include in its jurisdiction the towns of Rosenberg, Richmond, Wharton, El Campo, Victoria, Bay City, Alvin, Eagle Lake, Yokum, Brenham, Navasota, Bryan Herne, Nacogdoches and Lufkin.

Following are the officers of the League: President, David Daly, Po. 366V; vice-presidents, S. R. Bertron, Po. 14416; T. S. Prentice; J. D. McClellan, Po. 20080; U. W. Martin, Po. 17957; J. S. Styles; H. Houston. Executive Committee: A. J. Binz, Po. 1921V, Thirteenth Neptune, chairman; R. R. Roberts, Po. 2204; J. A. Tennant, Po. 17965; H. O. Clarke, Jr., Po. 6629; F. B. Hathaway, Po. 4980; H. G. Gilmore, Po. 4017; F. G. Frost, Po. 4015V. Secretary-treasurer, R. S. Daunoy, Po. 20073.

* * * *

Los Angeles F. R. Feitshans was the speaker at the luncheon meeting of the Los Angeles Jovian League, February 23, taking for his subject "Alaska," he outlined the wonderful possibilities for development of that country. Mr. Feitshans has recently returned from Alaska where he was the guest of the Government Railroad Commission.

At the luncheon meeting of the League, February 27, U. Oyama, Japanese Consul at Los Angeles, was the speaker. He spoke on "Japan." W. Doubra of the Wagner Electric Company presided as chairman of the meeting.

* * * *

JANUARY REJUVENATIONS

(Reports received too late for last issue)

GLOBE, ARIZONA

JOHN HOWLAND, Po. 18686, First Tribune of Globe, Ariz., held a Rejuvenation all by himself on January 23, and initiated sixteen candidates, using the lecture form of ceremony. The reason First Tribune Howland operated entirely alone was not a selfish one. It was the result of necessity. He was the only Jovian in the city of Globe, and there are no other leagues near. That was also the reason he did a good job and initiated sixteen candidates. He was lonesome. Think of one lone Jovian flocking by himself way out in a little city like Globe. Of course, there were other electrical men in the city, but they were not purified at the forge of Vulcan. Being a Jovian, First Tribune Howland knew how it was done, so going forth he rounded up the wandering Satellites, initiated them into the mysteries of Jovianism, and now there are seventeen real live Jovians in the flock at Globe.

* * * *

WINNIPEG, MAN.

WINNIPEG Jovians have a way of doing things in a big manner. Consequently, when a Rejuvenation was scheduled to be held in January they, as usual, went about making preparations to make it a real success. That they accomplished this purpose is well attested by the number of candidates initiated. There were exactly fifty wandering satellites rounded up for the Rejuvenation.

Nor was the number of candidates alone the only proof of the success of this Jovian function. Connected with it was one of those regular old-time "get-together" Joviations.

To First Tribune J. S. Henry, Po. 5994, is due great credit for the splendid Rejuvenation, although he asserts that the credit should go to the entire Jovian membership, all having co-operated with him effectively.

H. E. SHELTON, Po. 14400, First Tribune, Wilmington, Del., whose two Rejuvenations in January brought 61 new members into the Order.

The affair was held at the Hotel Fort Garry, starting at 6:30 and continuing until 11:00 p. m.

Among the prominent candidates initiated were A. W. McLimont, general manager, Winnipeg Electric Railway Company, and P. A. Macdonald, Public Utility Commissioner for Manitoba.

Addresses were delivered by the following speakers: H. W. Billings, Po. 5054, G. L. Guy, Po. 4727, Lieutenant Thos. Carlyle, Po. 5055, Controller Chas. F. Gray, Po. 15952, and J. G. Glassco, Po. 15951.

A splendid entertainment program, which included Sevenson's Orchestra, singers and Syd Barnes, was enjoyed by the attendance.

The initiatory ceremony was conferred with the lecture form.

* * * *

ABILENE, TEXAS

THE LECTURE form of Rejuvenation was used to initiate eleven candidates at Abilene, Texas, on the evening of January 26. The affair was held at the Knights of Pythias Hall.

First Tribune T. L. Miller, Po. 8766, was in charge, and was assisted by five members of the Order.

Among the prominent candidates initiated were, J. M. Dickie, auditor, American Public Service Company, and M. J. Treadwell, manager, Ballinger Light & Ice Company.

The notable guests present were R. J. Irvine, Po. 6251, and E. A. White, Po. 2216.

First Tribune Miller presided as chairman of the Joviation, and introduced as speakers R. J. Irvine, Po. 6251, E. A. White, Po. 2216, J. M. Dickie and J. Mc. Stephenson.

* * * *

AKRON, OHIO

A SPLENDID Rejuvenation that marks the advent of greatly renewed interest in Jovianism was held in Akron, Ohio, on the evening of January 31, by First Tribune E. Burt Fenton, Po. 18446, and his able assistants. The candidates numbered forty-two, prominent among whom were Edgar S. Martin, chief electrical inspector, city of Akron, and Harold LeRoy Falor, assist-

(continued on page eighteen)

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$1,120,000.00 (See Note)

~~$820,000.00~~ Annual I

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MAXIMUM (INDIVIDUAL) PROFIT $56

Should all who have joined the Order take advantage of the largest saving possible under the Jovian accident and health insurance plan their profit (saving) would amount to 20,000x$56, or MORE THAN A MILLION DOLLARS PER YEAR.

MINIMUM (INDIVIDUAL) PROFIT $13

When a Jovian invests in a $12-premium, five-thousand-dollar-principal, Jovian accident policy, he saves yearly the $13 difference between the price he pays and what similar protection would cost from any other source.

NOTE— $300,000 pos the figures pl January issu is due to the members can of the Jovian Policy made ary first.

	MINIMUM	MAXIMUM
1,000 JOVIANS CAN SAVE ANNUALLY	$13,000	$56,000
5,000 " " " "	65,000	280,000
8,000 " " " "	104,000	448,000
10,000 " " " "	130,000	560,000
20,000 " " " "	260,000	1,120,000

$104,000 YEARLY PROFIT NOW LIKELY

If 8,000 members profit by this opportunity (this now seems likely) the amount left in Jovian pockets this year, to be used for the hundred and one emergencies of these critical times, will total at least $104,000. (We have used the smallest policy in our calculation to make the figures all the more certain of realization.)

POLICIES AND NOW A

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Clip and Mail the Coupon Today

You are helpin Jovian ben

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IF YOU SO DESIRE, DATE YOUR APPLICATION TO TAKE EFFECT WHEN SOME OF YOUR PRESENT INSURANCE EXPIRES — PAY NOT UNTIL YOU RECEIVE THE POLICY.

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SYNDICATE TRUST BUILD

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The Jovian Order is Not in the Insurance Business

The Jovian Central Office, however, has made possible this conservation of Jovian expenditure by making the solicitation and handling the transaction without charge, and by placing the insurance with a tried, reliable company, amply equipped for carrying the risks. Jovian interests are further protected in that none but Jovians can secure this insurance at any price.

OMBINATIONS
ILABLE

	Annual Premium	Approximate Annual Savings
	.....$12.00	$13.00
	..... 24.00	26.00
	..... 20.00	15.00
	..... 40.00	30.00
a	..... 32.00	28.00
a	..... 52.00	43.00
a	..... 44.00	41.00
a	..... 64.00	56.00

You Should Share in This—Your Jovian Perquisite

If not carrying accident or health insurance, lose no time. Fill out and mail the attached coupon today. Particulars will come forward promptly.

If now carrying such protection (not Jovian) you are paying more for it than necessary. Use the coupon. Let us show you how to make a profit by getting your insurance for less money.

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N ORDER

IG ST. LOUIS

EVERY DOLLAR YOU INVEST IN JOVIAN INSURANCE, RELEASES NEARLY ANOTHER DOLLAR FOR YOUR OTHER PRESSING NEEDS.

Sign—Tear Out—Mail NOW!

THE JOVIAN ORDER

GENTLEMEN:

Send me complete information relative Jovian Accident and Health Insurance at greatly reduced rates.

(Signed) .....

(Address) .....

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A. W. DEVEAU, son of Albert S. Deveau, Po. 453, former president, The Deveau Telephone Mfg. Company, now secretary of the firm of Stanley & Patterson, New York, who is now a member of the 414th Battalion, U. S. Signal Corps, located "Somewhere in France", trying to bring the Kaiser to terms. His many friends in the electrical industry wish him success in his undertaking.

January Rejuvenations

(continued from page fifteen)

ant superintendent of substations of the Northern Ohio Traction & Light Company.

Those who addressed the meeting were V. W. Shear, Po. 14399, secretary; E. Burt Fenton, Po. 18446, president; H. B. Bixler, Po. 14360; A. P. Regal, Po. 19064, and W. E. Salber, Po. 14397.

The lecture form of initiation was used, and no attempt was made to prepare an elaborate entertainment at this time.

The League is planning to hold another Rejuvenation in April or early in May, and the members are looking forward to a regular Jovian get-together affair at that time.

* * * *

TRENTON, N. J.

FIRST Tribune J. P. Alexander, Po. 11892, assisted by other loyal members of the Order, started in to promote renewed interest in Jovian affairs at Trenton the first of the year, and their efforts resulted in a Rejuvenation held in that city on the evening of January 28.

Public Service Hall was the place chosen for the affair.

There were eighteen candidates to be initiated, and they were enlightened as to the mysteries of Jovianism by the lecture form.

First Tribune Alexander was assisted in the Rejuvenation by J. L. Tower, Po. 14711, Robert Bellar, Po. 16435, and J. B. Kelly, Po. 2774.

With this addition to the local membership, Trenton Jovians have hopes of building up the organization rapidly.

Immediately following the Rejuvenation they applied for a Charter and were assigned No. 33.

The prospects for a still greater membership are exceptionally good, as the new League will begin activities at once to inaugurate several movements that will be of benefit to the local industry.

* * * *

STARK COUNTY LEAGUE

THE STARK County Jovian League held a Rejuvenation and Joviation in the Fraternal Club Rooms at Alliance, Ohio, on the evening of January 31, that increased the membership of the League and the Order forty-three members. Besides the candidates, there were forty members of the League from the cities of Massillon, Alliance Canton and other nearby points present.

First Tribune L. J. Lemen, Po. 13195, was in charge of the affair and presided as toastmaster of the banquet.

Among the prominent candidates initiated were H. G. Bonner, general manager, Alliance Gas & Power Company, Alliance, Ohio; I. W. Fisher, president of the Fisher Electric Company, and H. S. Lindsley, superintendent, McCloskey Register Company, Massillon.

The lecture form of initiation was used with impressive effect.

With this addition to the Stark County League, there is every indication that much effective work will be done to aid the industry in its work of development during the coming year.

* * * *

NEW YORK

ON THE afternoon of January 29, a Rejuvenation was held by First Tribune G. V. W. Pelz, Po. 18674, New York City, at 104 Broad Street.

Nineteen candidates were initiated, included among them were James Gerald Baldurn, service manager, Goodyear Rubber Insulating Company; Henry Chippindale, electrical contractor, and William E. Huntington, credit manager, New York Telephone Company.

The lecture form of initiation was used.

Owing to the lack of details sent the Central Office a more elaborate account of this interesting event can not be written at this time.

* * * *

ILLINOIS CONTRACTORS CHANGE ORGANIZATION

THE Illinois Electrical Contractors' Association, at its annual convention held in Chicago, February 22 and 23, voted to change the name of its organization to the "Illinois State Association of Electrical Contractors and Dealers," and adopt the National Organization plan. The constitution and by-laws of the National Organization were adopted without discussion, and the entire membership of the organization together with its funds, amounting to $400 was transferred to the new body.

The election of officers for the ensuing year resulted as follows: State Chairman, J. A. Weishar, Rock Island; secretary-treasurer, L. B. Van Nuys, Po. 11386, Peoria; assistant secretary, G. A. Engleken, Chicago; district chairman, R. W. Poelma, Chicago; E. F. Pendergast, Rock Island; W. S. Savidge, Macomb; L. B. Van Nuys, Peoria; J. Hughes, Champaign; John Haenig, Springfield, and Edgar Rice, Alton.

* * * *

HEROIC WOMEN OF FRANCE

MY WORDS are not powerful enough to do even scanty justice to the most heroic figure in the modern world and of ages past—the woman of France. Of the healthy men who are engaged in the military service in France, practically all are engaged either in transportation or in the manufacture of munitions, leaving the agriculture absolutely to the women. Not only this, but they have stepped into the place of work animals; you can go into any section of France today and see women of magnificent, noble womanhood hitched to the plow and cultivating the soil. All of the agriculture rest upon their shoulders. The home, always an extremely efficient home, maintains a few old men, the wounded, and the tubercular. Uncomplaining, with high devotion, with an attitude that amounts almost to religious exaltation, the woman of France bears the burden.

Now, conditions being as they are, does it lie within the heart of the American people to preserve and hold to every convenience of our life at the expense of adding an additional burden to the womanhood of France? This is the exact question that is involved in our substitution of other cereals in place of wheat.

The women of France must be enabled to hold up the morale of the French soldier until next spring. The morale of the house decides the morale of the soldier in the fighting line. We can do this by giving to them the greatest possible freedom in their food supply, and of this wheat is the chief factor.—Dr. Alonzo Taylor.

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

Advice

By W. R. J.

Yes, Matilda,
There is something
That we wish to give
Away,
On the slightest
Provocation
Any time both night
And day.
It is not our lands
Or money,
Nor our labor
Little Honey;
It is not
Our automobiles
Nor our jewels
I confess,
But the hoard
Of information,
Wealth of knowledge,
Mind inflation
That in some
Abnormal quantity
We feel that
We possess.

Ah! Matilda,
We are human,
And as humans seek
For fame.
We would like to have
Our neighbors
All our wisdom to
Proclaim,
While appearing
Sympathetic,
Really it seems
Authentic,
That our hidden
Inclination
Is to show that we
Are wise.
We are smart in our
Opinion
And our neighbor is
A minion
Whom we often must
Enlighten
And we often must
Advise.

• • • •

More Advice

SPEAKING of advice, wouldn't it be a preponderous task if it was necessary to separate and classify all the advice given by human beings into the three classes; good, bad and indifferent?

That task would require an army of workers of such magnitude that if they were stood sideways in a line it would reach from Hoboken to Port Said with a loop in it big enough to throw the Kingdom of Siam through and back again without any one getting dust on their shoes.

If those workers were all assembled in one moving picture theater, the screen would have to be one and one half times as large as Lake Michigan to allow them all to observe the pictures that were projected upon it. It would take six days and five nights to get them all seated. They would consume eighteen tons of popcorn, sixty-four truck-loads of peanuts and the entire output of seven chewing-gum factories during the performance.

Working ten hours a day, six days in the week, counting twenty-eight working days in a month, if the work was taken up from the time Socrates first started living in a barrel and brought down to the exact day General Putnam's wife wrote to him to be certain and wear his sock around his throat at night whenever he had a cold, the rate of mortality from old age among the fourth generation of workers would be something awful before the task was completed.

And still this thing goes on among us practically unrestrained.

The great question is will the war have any effect on it? When the diplomats of the world get together to sign up treaties for a universal peace are they going to take it into consideration?

All of this talk about no indemnities and no annexations is very well, but what about No Advice? If it is not written into the treaties what will be the use of peace?

We know the world will not be free for Democracy or anything else until it is eliminated or restrained.

If the diplomats who conduct the peace parleys get together they can formulate an international law to make every person take his own advice.

With such a law in effect and rigidly enforced the World would not only be safe, but so much lost and misdirected energy would be saved and eliminated that if properly applied would salvage all the ships sunk by submarines.

Why does not the Senate investigating committees take this question up and find out why more stress has not been laid upon the question. The future slogan of the world should be: "We Won't take Advice nor Give any."

• • • •

Beautiful Spring

By W. R. J.

Spring will soon be here,
Beautiful Spring!
There will be flowers
And song birds,
And those balmy breezes
Wafting aromas of buds
And fresh green leaves.
And the sunshine,
How it will reflect
Upon the green grass!
Out in the parks,
That are now deserted,
Little children will play.
We will pause to watch them.
Their cheerfulness
Will gladden our hearts,
Their laughter,
The sound of bird-songs
And the sight of flowers
Will arouse us from
Our apathy.
It will be a new
Awakening.
We will feel that we
Have been asleep,
That the snow and sleet
And bleak winds
Were only a nightmare.
We will inflate our chests
And draw in deep breaths
Of air.
Then we will sit down
Upon a bench
And dream dreams
Of wealth and power,
Yawn a little
And yield ourselves
Up to the soothing influence
Of the hook-worm.

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PRACTICAL LESSONS IN ELECTRICITY

LESSON THIRTY-FIVE

ALTERNATING-CURRENT MOTORS

By TERRELL CROFT

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ALL ALTERNATING-CURRENT motors may be classified into two general divisions, as shown below. Furthermore, a synchronous motor may be further sub-divided as indicated, thus:—

- (1) Synchronous Motors
  - Single-Phase
  - Polyphase
- (2) Asynchronous Motors
  - (a) Induction Motors
    - Single-Phase
    - Polyphase
  - (b) Commutator Motors (Single-Phase)
    - Series
    - Compound
    - Shunt
    - Repulsion

The fundamental operating principle is the same for all electric motors, both alternating-current and direct-current. That is, in every case, rotation of the motor is due to the magnetic interaction between a current-carrying conductor and a magnetic field in the motor in which the conductor finds itself. In compliance with well-established laws there is always a magnetic force tending to thrust such a conductor from the field. It is

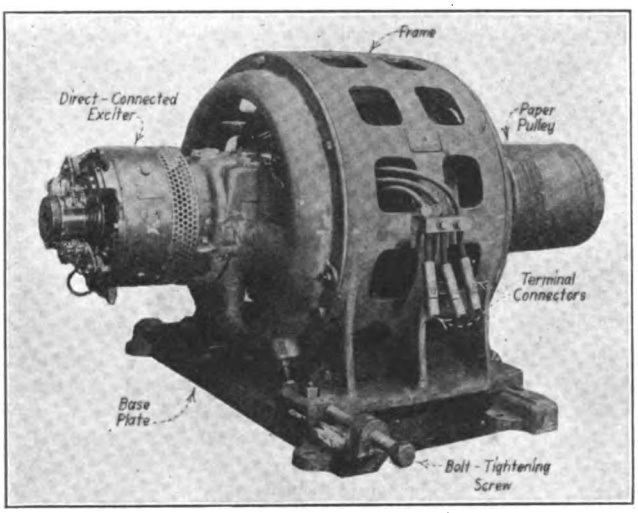

Fig. 1—Typical Revolving Field Two-Bearing Synchronous Motor. (This is a 187 h. p., at 100 per cent power factor, 900 r. p. m., 2300-volt, 3-phase, 60-cycle, Allis-Chalmers Machine. The Exciter is Direct Connected).

this tendency which produces rotation of the rotor. Furthermore, in every motor (both a. c. and d. c.) the current which is forced through the armature is limited by a counter or back e.m.f. which is developed in some fashion or other in the motor. The e.m.f. value which is actually effective in forcing current through the motor is, then, not the line voltage but it is the difference between the line voltage and this counter voltage which is produced in and by the motor. The value of the counter e.m.f. is always such that it tends to limit automatically the current impelling the motor to that value which is necessary to "pull" the load then on the motor. Thus when the load on any electric motor is heavy, the counter e.m.f. then developed by the motor is relatively small. And a large current, whereby the load may be pulled, is permitted to flow. When the load is light, the counter e.m.f. becomes small automatically. Thus current through the motor at light load is limited to a low intensity.

HOW THE SYNCHRONOUS MOTOR WORKS

Operation of the synchronous motor is due to the same general phenomena as that to which the operation of every other kind of electric motor is due. First, an impressed or line e.m.f. (it must be an alternating e.m.f. for a synchronous motor) must be provided which will impel current through the armature of the machine. Then its rotor is caused to turn by virtue of the magnetic interaction between the current-carrying conductors on the armature and the magnetic field. A counter e.m.f. is produced

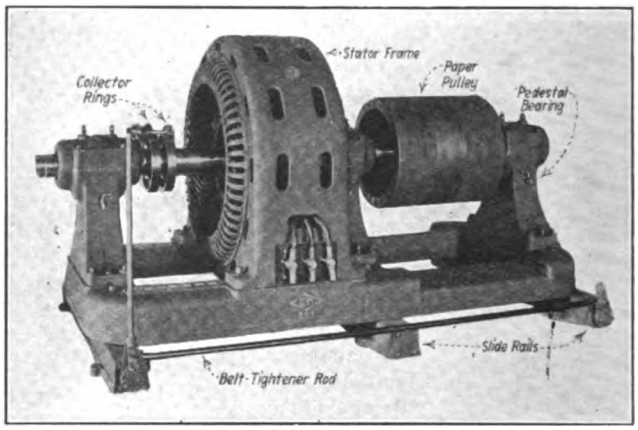

Fig. 2—Typical Three-Bearing Belted Revolving Field, Large Capacity Synchronous Motor, a 200-h. p., 600-r. p. m., 2300-volt, 3-phase, 60-cycle Machine of the Electrical Machinery Company, Minneapolis, Minn.

by the armature conductors cutting through the field as the armature rotates. This limits the current through the armature. As the load on the motor becomes greater the counter e.m.f. decreases, permitting more current to flow to produce more power. If the load on the motor decreases, the counter e.m.f. is

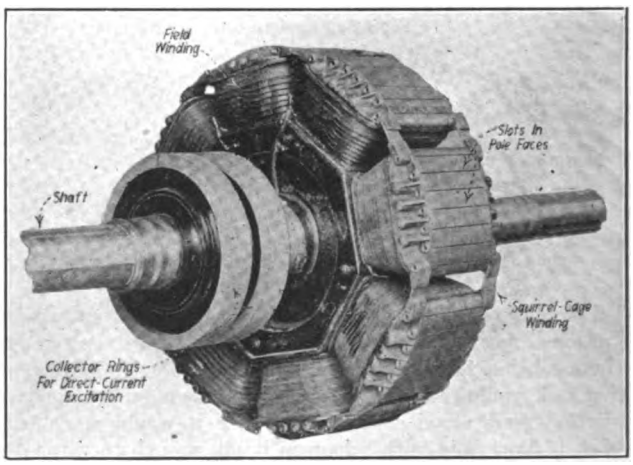

Fig. 3—Eight-Pole Rotary Field of a Self-Starting Synchronous Motor, Showing "Squirrel Cage" Starting Winding in Slots in Pole Faces. (Electrical Machinery Company, Minneapolis, Minn.)

correspondingly increased, decreasing proportionately the power taken by the motor. Always, however, the power in watts taken by the motor equals the product of the input current and the active or energy e.m.f. (Not the line e.m.f. necessarily.) An

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explanation of just how these phenomena produce rotation of a synchronous motor will be given in succeeding sections.

The construction of the synchronous motor is practically identical with that of the alternating-current generator. In fact, any commercial alternating-current generator will operate as a synchronous motor. Hence, it follows that synchronous motors may be of either the revolving-armature or the revolving-field type. Furthermore, they may be single-phase or polyphase. However, practically all modern machines are revolving-armature and three-phase. Figs. 1 and 2 show typical medium-capacity

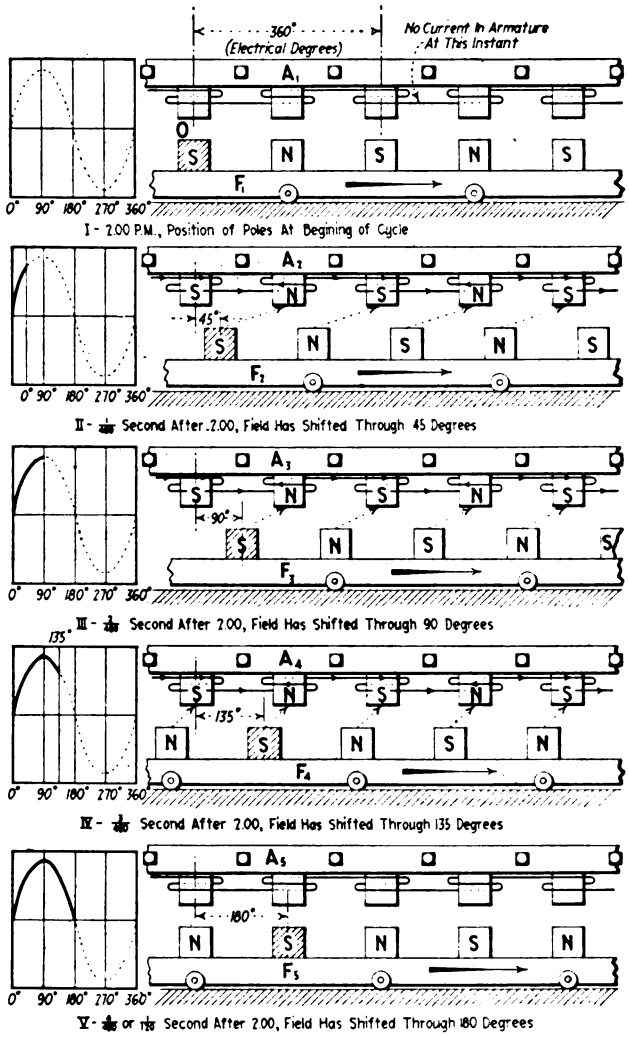
360° (Electrical Degrees)
No Current In Armature At This Instant
I - 2.00 P.M., Position of Poles At Begining of Cycle
II - 1/8 Second After 2.00, Field Has Shifted Through 45 Degrees
III - 1/4 Second After 2.00, Field Has Shifted Through 90 Degrees
IV - 3/8 Second After 2.00, Field Has Shifted Through 135 Degrees
V - 1/2 or 1/8 Second After 2.00, Field Has Shifted Through 180 Degrees

Fig. 4—Illustrating the Principle of the Synchronous Motor

and large-capacity machines. The revolving-field windings are excited with direct current impelled by an exciter. The single-phase synchronous motor is not self-starting but must, by some external means, be brought up to synchronous speed before it will carry its load. The polyphase motors can be made self-starting where they can start without much load. Where a polyphase motor is to be self-starting, its rotor must be provided with a squirrel-cage winding (Fig. 3). The constructions and characteristics just outlined will be treated in detail in sections which follow.

The speed of a synchronous motor is always synchronous speed. Its speed regulation is 100 per cent. That is, the operating speed of such a motor is, for reasons which will be explained, determined wholly by the frequency of the supply circuit and the number of poles on the machine. There are certain rules and formulas whereby the synchronous speeds of alternating-current generators and induction motors are computed. The same rules and formulas are used for finding the speeds of synchronous motors. If a load greater than its capacity is imposed on a synchronous motor, it will then not operate at a speed lower than the synchronous, but will merely "drop out of step" and stop. Why the same formulas are used for computing the speeds of alternating-current generators and synchronous motors is explained in a succeeding section.

NOTE.—A synchronous motor operates at the speed at which it would, if it were driven as a generator, have to operate to develop the frequency of its supply circuit. Thus a synchronous motor turning at synchronous speed is said to be operating in "synchronism" or in step with the generator which serves it.

The general characteristics of the synchronous motor (the why in each case will be explained below) are these:—

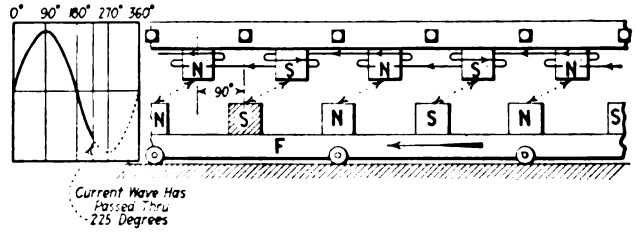

Fig. 5—Showing How the Moving Field of a Synchronous Motor Must Shift Along at "Synchronous" Speed

(On a 60-cycle circuit, conditions for which are pictured above, the direct-current-excited field, F, will, if it moves at synchronous speed—and it must move at synchronous speed if its operation is to continue—shift exactly the distance OP between centers of adjacent like poles in 1-60 second. This distance OP always equals 360 electrical degrees. But the actual spacing OP between like poles in inches or in feet in an actual motor depends on the size and speed of the machine.

(1) *It is, as described above, primarily a constant-speed motor.*

(2) *If the synchronous motor is overloaded its breakdown point or maximum output value is reached; its speed decreases and it stops.*

(3) *By varying the excitation of the direct-current field the motor can, at will, be made to take a leading or lagging current from the line. When under excited, the current through it will be lagging. When over excited, the current will be leading. When the current through an over-excited synchronous motor is leading, its effect on the circuit is then similar to that of a permitter or condenser in the circuit. Hence, the machines when thus used are called synchronous condensers. By virtue of this characteristic synchronous motors or condensers can be utilized for the raising of the power factor of a circuit.*

(4) *The starting torque is small. The single-phase motor has no starting torque and the polyphase motors have a very low starting torque (about 25 per cent full-load torque) which is seldom sufficient to start a mechanical load of any consequence.*

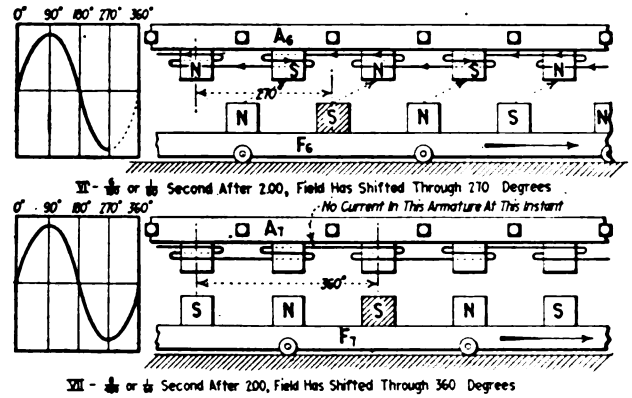
VI - 3/8 or 5/8 Second After 2.00, Field Has Shifted Through 270 Degrees
No Current In This Armature At This Instant
VII - 1/2 or 1 Second After 2.00, Field Has Shifted Through 360 Degrees

Fig. 6—A Continuation of Fig. 5, Showing Operation of a Synchronous Motor on a 60-Cycle Circuit

Advantages and Disadvantages of the Synchronous Motor may be recited thus:

Advantages, which may, however, in certain cases be disadvantages:—

(1) Constant-speed operation at all loads within its range, assuming the supply circuit to be of constant frequency.

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(2) Power factor of the power which it takes is under control of the attendant.

(3) Can be used for raising the power factor of the circuit on which it operates. It can be used solely either for correcting power factor or for driving a mechanical load. Or it may be used for the simultaneous correcting of low power factor and the driving of a mechanical load.

Disadvantages:—

(1) Low starting torque.

(2) No possibility of speed control.

(3) Source of direct current required for field excitation.

Fundamental operating principles of the synchronous motor can be understood from a consideration of the arrangement of Fig. 4:—

EXPLANATION.—*A* is a long heavy stationary iron bar on which are mounted downwardly projecting pole pieces, *N*, *S*, etc. These poles are excited by alternating-current impelled by the alternator *G*. Although only five poles are shown, this bar with the equidistantly spaced poles on it is assumed to extend for an indefinite distance in each direction. The alternating-current winding is reversed on alternate poles of *A*. Hence, with the alternating current due to *G* considered at some given instant and in a certain direction (for example, in the direction shown in Fig. 4) the poles will at that instant be of different polarities, *N*, *S*, *N*, *S*, etc., along the bar indicated. But with each alternation of the alternating current, the polarity of each pole will reverse.

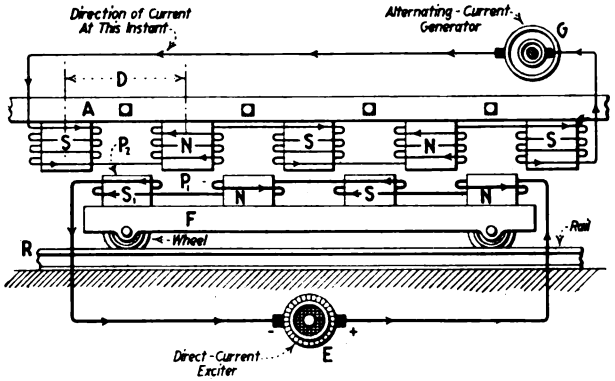

Fig. 7—Current Wave has Passed Through 225 Degrees but Slowly-Moving Field has Passed Through Only 90 Electrical Degrees. Electro-magnetic Repulsion Tends to Move the Field Toward the Left

F is a truck mounted on wheels and traveling on rails, *R* Thus *F* may be moved along under the poles of *A* longitudinally either to the right or to the left. On the iron body of *F* are mounted four upwardly-projecting poles. The winding of these is energized with direct current from the exciting generator *E*, which is supposed to move with the truck. The winding is reversed on every other pole of *F*. Hence, the polarities of these direct-current poles will be *S*, *N*, *S*, *N*, as shown. Since these poles are excited with direct current, their polarities will be always those indicated.

At the instant pictured in the illustration with the current from *G* in the direction shown, the unlike polarity poles on *A* and on *F* attract one another. There is, then, a force tending to move *F* toward the right at the instant shown. But if *F* is not thus shifted toward the right, then, when the current from *G* reverses in direction, the polarities of the poles on *A* will be such that there will be a force tending to shift *F* toward the left.

However, assume that *F* is moved toward the right by the attractive force of the unlike poles of *F* and *A*. Then if the alternating current which excites *A* reverses before P_2 attains a position under P_1, *F* will be forced back toward the left because the polarities of all of the poles of *A* will be reversed simultaneously. Again, if P_2 shifts to the right and past P_1 before P_1 reverses, then P_2 will be pulled back. But if P_2 reaches a position just under P_1 as the polarity of P_1 is changed by the reversal of the alternating current, then *F* will be forced ahead to the right.

Thus if *F* is started by some outside force toward the right at such a speed that it travels the distance *D* (Fig. 4) between any two adjacent poles on *F* in the time occupied for one alternation of the alternating current due to *G*, *F* will continue to move. If it is started toward the left at this speed it will continue to move toward the left. If it is started toward the right at this speed it will continue to move toward the right. If *F* is not started at the correct synchronous speed it will not continue to move longitudinally but will merely oscillate through the distance *D*.

The arrangement of Fig. 4 illustrates the principle of the synchronous motor. In actual synchronous motors the alternating-current poles are inside of a stationary ring and the direct-current poles are mounted on a rotor which rotates within the ring (see Fig. 8).

Why the synchronous motor can operate only at synchronous speed will be evident from a consideration of Figs. 5, 6 and 7. In these illustrations the truck, *F*, of Fig. 4 has been replaced by a bar, F_1, F_2, etc., which is supposed to extend indefinitely in each direction. Mounted under the bar at intervals are wheels upon which it can roll. The poles, *S*, *N*, *S*, *N*, etc., carried on *F* are supposed to be excited by direct current to the polarities indicated. To simplify the illustration the exciting winding is not shown. In Figs. 5 and 6 it is assumed that the bar *F* is moving toward the right at synchronous speed. These two illustrations trace the movement during one complete cycle. It is assumed that the frequency of the exciting current is 60 cycles and that our examination of the situation starts at exactly two o'clock p.m.

Concentrate attention on the pole *S*, which is cross-sectioned to identify it. 1/480 sec. after two p. m. the alternating current wave has passed through 45 deg. and the field F_2 has, by the

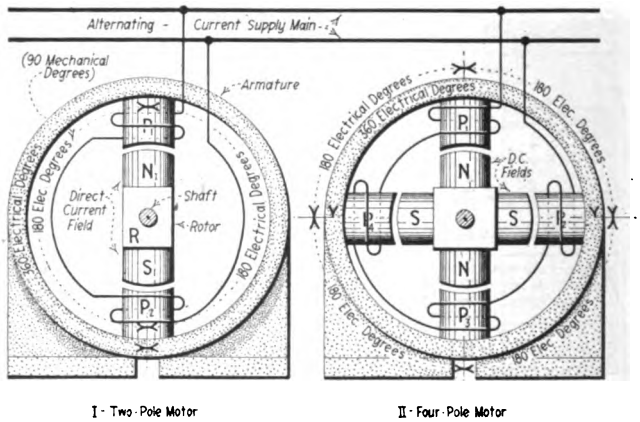

Fig. 8—Illustrating Why the Speed of a Synchronous Motor is Determined by the Number of Poles

magnetic interaction, been shifted to the right through 45 electrical degrees. Likewise, tracing the operation through the pictures *III* to *VII*, it will be noted that the 60-cycle alternating-current completes one cycle during 1/60 sec. and during that time the pole *S* is impelled through a distance equal to that between centers of unlike poles. That is, it is shifted (*VII*) through 360 electrical degrees. Conditions remaining the same, the field *F* would continue to shift toward the right at the same speed as long as its excitation with direct current and the excitation of the armature *A* with alternating current continued.

A study of the illustrations of Figs. 5 and 6 will render it evident that the shifting could not be otherwise than at synchronous speed. Thus each direct-current pole on *F* must shift through the distance between alternate poles (360 electrical degrees) of the armature *A*, in the same time that a field pole of the alternating-current generator, which is supplying power, passes between two successive poles on its armature.

If, as suggested in Fig. 7, the field *F* had been shifted to the right through only 90 deg. while the current wave had passed through 225 deg. (as shown in the graph at the left) then the magnetic interaction, at this instant, between the like polarities would be such that the field bar would be impelled to the left instead of toward the right. Its motion would be reversed, showing that *F* must move at synchronous speed if its uniform motion in one direction is to continue.

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The Relation of Speed, Frequency and Number of Poles in a synchronous motor can be understood by a study of Fig. 8. Assume that a portion of the armature *A* of Fig. 5 with two extending poles, P_1 and P_2, on it is bent into a ring and shown in Fig. 8—*I*. Also assume that two of the direct-current poles, N_1 and S_1, are mounted diametrically opposite one another on a shaft. Then, if P_1 and P_2 (Fig. 8) are excited with alternating current and N_1 and S_1 are excited with direct current, the rotor *R* thus formed will revolve within the armature if it is first brought up to synchronous speed. It is evident from what has been described in connection with Figs. 4 and 5 that in this two-pole machine the rotor *R* will complete one revolution (that is, pass through 360 electrical degrees—the distance between like poles) during one cycle of the alternating-current supply.

If the frequency is 1 cycle per sec. the rotor *R* will make 1 revolution per second. Now if a four-pole motor (P_1, P_2, P_3, P_4) be arranged as at *II* (Fig. 8) it is evident that, during 1 cycle, a field pole will pass through only ½ revolution. Therefore, with this four-pole machine and a frequency of 1 cycle per sec. the motor would make 2 revolutions per second. Thus, in making one complete revolution the field of any synchronous motor turns through 360 mechanical degrees. The number of electrical degrees through which it turns depends upon the number of poles. Obviously:—*rev. per sec.* = *cycles* ÷ (*no. poles* ÷ 2). Or simplified:—*rev. per sec.* = (2 × *cycles*) ÷ *no. poles*. Then the *rev. per min.* will (since there are 60 sec. in a min.) equal 60 × (2 × *cycles*) ÷ *no. poles* = (120 × *cycles*) ÷ *no. poles*. It will be noted by referring to Art. 713 in the author's PRACTICAL ELECTRICITY that the equation just given is the same as that, there derived, for determining the speed of an alternating-current generator.

EXAMPLE.—What is the speed of an eight-pole, 60-cycle, synchronous motor? SOLUTION.—Substitute in above equation:—*r. p. m.* = (120 × *cycles*) ÷ *poles* = (120 × 60) ÷ 8 = 900 *r. p. m.*

EXAMPLE.—It is desired to install on a 60-cycle circuit a synchronous motor which will operate at 1200 r. p. m. How many poles will this machine have? SOLUTION.—Substitute in equation:—*no. poles* = (120 × *cycles*) ÷ *r. p. m.* = (120 × 60) ÷ 1200 = 6 *poles*.

EXAMPLE.—It is known that a certain motor has 10 poles and that its operating speed is 300 r. p. m. What must be the frequency of the supply circuit upon which this machine is used? SOLUTION.—Substitute in the formula:—*cycles* = (*poles* × *r. p. m.*) ÷ 120 = (10 × 300) ÷ 120 = 25 *cycles*.

NOTE.—In the author's AMERICAN ELECTRICIANS' HANDBOOK there is a table of synchronous speeds of alternating-current motors and generators for the commonly-used frequencies between 25 and 133 cycles and for the commonly-used numbers of poles between 2 and 100.

* * * *

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Superintendents	25	26–46	H. S.-Univ.	3–15 yrs.	$100–500	Anywhere.
Supervisors Lighting	1	25	Technical	7 yrs.	$100	East.
Telephone Engineers	2	24–28	H. S.-Tech.	5–7 yrs.	.....	Anywhere.
Testing Engineers	1	24	Technical	2 yrs.	$100	Anywhere.
Wiremen	2	23–30	High School	7–17 yrs.	$75–125	Anywhere.

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JOVIANS!

Can You Use Any of These Jobs?

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, are seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau. A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of any of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

201. Draftsmen. Experienced men wanted by Ohio electrical manufacturer.

202. Meter Testers. Western New York power company needs experienced men.

203. Salesman. Tennessee supply house can use several capable men on road.

204. Salesman—Estimator. Combination man, familiar with panel and switchboard construction, wanted by New York manufacturer.

205. Order Clerk. Attractive opening with Chicago concern. with chance of advancement.

206. Engineer. An Ohio public service company needs man familiar with steam turbines and capable of taking charge of a plant of 10,000 to 25,000 kilowatts capacity.

208. Salesman. $1,500 per year to right man, to cover electrical jobbing trade in Michigan, Ohio, Indiana and Kentucky.

209. Central Station Engineer. Opening with Arkansas concern.

210. Draftsman and Estimator. Two men needed for switchboard and panel work; Connecticut concern.

211. Estimator. Good opening with Cincinnati electrical house.

212. Electrician-Wireman. Combination man wanted by Oklahoma public service corporation.

213. Draftsman. Opening in Mississippi Valley for man familiar with heating and ventilating work.

214. Hydro-Engineer. Combination man wanted; familiar with electrical and power-house work, hydro generation, Diesel oil engines, and with outside line maintenance and inside wiring; $1,200 per year and house rent to right man.

215. Construction Engineer. Oklahoma public service company can use man in valuation work, later in other departments.

216. Meter Testers. Iowa lighting concern has place for several competent men.

217. Sales Representative. Attractive opportunity with large Cleveland manufacturing concern; man of highest sales-mechanical ability needed.

218. Assistant Foreman. Warehouse position in New Orleans; $60 per month.

219. City Salesman. $25 per week and bonus selling electrical auto accessories; southern city.

220. Road Salesman. Old, established electrical supply house in New Orleans will pay $30 per week and premium for capable man selling auto accessory and electrical lines.

221. Sales Engineer. Ohio manufacturing concern wants man who can produce results.

222. Office Man. Opening with Philadelphia manufacturer. Knowledge of stenography and typewriting essential; above draft age.

223. Stock Clerk. Man familiar with electrical supplies and handling of stock cards, wanted in Philadelphia.

224. Assistant Advertising Manager. Texas public service concern has opening for a really technical man, who will also edit a house organ. Good mixer needed.

225. Armature Winders. Illinois electric plant can use several.

226. Lineman. Mississippi lighting and power company has opening for man familiar with meter and transformer installations.

227-8. Salesman. New York lamp manufacturer has opening for man on Pacific Coast, also one in home office.

229. Shipping Department Head. Philadelphia manufacturing house wants all-round man, thoroughly familiar with electrical lines.

230. Superintendent. Wisconsin electrical supply house needs man with executive ability to handle fifty men and take charge of shipping and receiving departments.

231. Draftsman. Ohio Valley manufacturer can use man with knowledge of electrical design.

232. Draftsman. Young technical man over draft age or disqualified, familiar with shop practice in designing switchboards; New England concern.

233. Estimator. Man needed for panel and switchboard work; not subject to draft; Connecticut concern.

234. Salesmen. Openings for two men with Texas electrical and machinery house.

235. Salesmen. Wisconsin manufacturer is looking for road men to handle a line of gas and electric fixtures.

236. Salesmen. Chicago position; to reach the jobbing and industrial plants for large electrical manufacturer.

237. **Clerks**
Draftsmen
Lamp Engineers
Lamp Factory Foreman
Lamp Factory Superintendent
Electrical Testing Engineer
} Large Eastern lamp manufacturer is looking for men in all these classes.

238. Assistant Sales Manager. Position now open with large Eastern tool manufacturer; will lead to more responsibility later; prefer man acquainted with tools of the electrical and plumbing trades.

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STATESMEN-AT-LARGE

ALEXANDER, H. W., Po. 17191, 29 West Thirty-Ninth St.....New York, N. Y.
BINFORD, JULIAN, Po. 1178V, care Westinghouse Lamp Co.....Altanta, Ga.
BISCHOFF, W. E., Po. 3190, care W. N. Matthews & Bro.....Chicago, Ill.
CHASE, SAMUEL A., Po. 4424, care Westinghouse Electric & Manufacturing Co.....East Pittsburgh, Pa.
COLKITT, J. N., Po. 2627, care John A. Roeblings Sons Co.....Los Angeles, Cal.
CROWFOOT, C. M., Po. 1182, care Crouse-Hinds Co.....Cincinnati, Ohio
CROW, GALEN, Po. 925V, care Public Service Co. of Oklahoma.....Guthrie, Okla.
DOWNS, B. M., Po. 2508, care Hemingray Glass Co.....Covington, Ky.
DUNHAM, A. W., Po. 7352, care Sun Ray Manufacturing Co.....Oshkosh, Wis.
FOSTER, F. C., Po. 3398, 823 Illuminating Building.....Cleveland, Ohio
GUARDIA, A. A., Po. 2657, 4447 Magnolia Ave.....Chicago, Ill.
HERSTEIN, W. R., Po. 765V, care Electric Supply Co.....Memphis, Tenn.
HILL, G. W., Po. 1271, 29 West Thirty-Ninth St.....New York, N. Y.
HICKOX, NORMAN B., Po. 7881, care National X-Ray Reflector Co., 235 West Jackson Blvd.....Chicago, Ill.
JOHNSON, FRED, Po. 177V, 1110 Federal Reserve Building.....St. Louis, Mo.
LAUDERBACH, F. E., Po. 11655, 917 Pine St.....St. Louis, Mo.
MONTGOMERY, R., Po. 6147, care Louisville Gas & Electric Co.....Louisville, Ky.
RAMIER, J. F., Po. 10604, care Memphis Cons. Gas & Electric Co..Memphis, Tenn.
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville, Ky.
RIPLEY, L. O., Po. 7042V, care Kansas Gas & Electric Co.....Wichita, Kan.
SERVA, A. A., Po. 425, 2420 Hoagland Ave.....Ft. Wayne, Ind.
VIOT, H. F., Po. 2156, 1810 Farnam St.....Omaha, Neb.
VOGAN, W. G., Po. 15974, care Northern Electric Co.....Winnipeg, Man.
VOGEL, J. C., Po. 2254-32V, Fifty-Ninth and Woodland Ave.....Philadelphia, Pa.
WADDINGTON, E. H., Po. 5176, care Western Electric Co.....St. Louis, Mo.
WAKEMAN, J. M., Po. 524, 29 West Thirth-Ninth St.....New York, N. Y.

JOVIAN STATESMEN

ALABAMA
MATTHEWS, H. W., Po. 4476, care Burgoon-Matthews Electric Co.....Birmingham

ARIZONA, CALIFORNIA, NEVADA
SPERRY, LEWIS E., Po. 9415, care New York Insulated Wire Co.....San Francisco

ARKANSAS
GRIFFITH, C. J., Po. 13901, care Little Rock Railway & Electric Co...Little Rock

CONNECTICUT
HOLMES, T. L., Po. 3046, care Western Electric Co.....West Haven

GEORGIA
COLLIER, RAWSON, Po. 4458, care Georgia Railway & Power Co.....Atlanta

IDAHO
KIERSTED, EARNEST C., Po. 10258, care Idaho Power Co.....Twin Falls

ILLINOIS
SPAKE, L. C., Po. 15397V, care Western Editor McGraw-Hill Publishing Co..Chicago

INDIANA
LEE, WALLACE O., Po. 11440, care Indianapolis Light, Heat & Power Co. Indianapolis

IOWA
GARNER, H. W., Po. 19507, care Des Moines Electric Co.....Des Moines

KENTUCKY
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville

LOUISIANA
PORTEOUS, W. A., Po. 9226, care Western Union Telegraph Co.....New Orleans

MASSACHUSETTS
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston

MICHIGAN
CAVANAUGH, J. A., Po. 11199, care Benton Harbor & St. Joe Ry. Co..Benton Harbor

MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA
VILETT, W. H., Po. 3675V, care Sterling Electric Co.....Minneapolis

MISSOURI
JOHNSON, FRED, Po. 177V, care Wagner Electric Manufacturing Co...St. Louis

NEBRASKA
ZIMMAN, I. B., Po. 1411, care Omaha Electric Light & Power Co.....Omaha

NEW HAMPSHIRE
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston Mass.

NEW JERSEY, DELAWARE
HOWLETT, C. A. S., Po. 279.....Elizabeth

NEW MEXICO
SHEPARD, J. A., Po. 16106, care Deming Ice & Electric Co.....Deming

NEW YORK
HINES, E. G., Po. 16222, care Electrical World, 239 West Thirty-Ninth St.New York

OHIO
P. B. ZIMMERMAN, Po. 7305V, care National Electric Lamp Association, Nela Park.....Cleveland

OKLAHOMA
McCALLUM, CHARLES, Po. 3394, care Western Electric Co.....Oklahoma City

PENNSYLVANIA
CRISS, GEO. H., Po. 3364.....Pittsburgh

RHODE ISLAND
DAVENPORT, E. R., Po. 8019, care Naragansett Electric Light Co.....Providence

SOUTH CAROLINA
FULLER, W. W., Po. 16462, care Isle of Palms Traction Co.....Charleston

TENNESSEE
WATSON, C. J. R., Po. 2131V, care Electric Supply Co.....Memphis

TEXAS
CLARK, HIRAM O., Po. 6629, care Houston Lighting & Power Co.....Houston

UTAH
TALMADGE, CHARLES H., Po..1431, care Western Electric Co.....Salt Lake City

VERMONT
LARRABEE, E. E., Po. 1145, care Twin States Gas & Electric Co.....Bennington

VIRGINIA
SEILER, GUY E., Po. 7479, care Virginia Railway & Power Co.....Richmond

WEST VIRGINIA
POWERS, W. R., Po. 2784, care Consolidated Heat, Light & Power Co...Huntington

WISCONSIN
GOLIN, CARL, Po. 12385V, care Northwestern Storage Battery Co.....Milwaukee

PROVINCE OF ALBERTA
RICHARDS, NORMAN S., Po. 8985, care Northern Electric Co.....Calgary

PROVINCE OF MANITOBA
SCHUMACHER, J. H., Po. 1742, care Schumacher-Gray Co., Ltd.....Winnipeg

PROVINCE OF QUEBEC
HYDE, E. N., Po. 1614, care Northern Electric & Manufacturing Co...Montreal

FIRST AND SECOND TRIBUNES

ALABAMA
MATTHEWS, H. W., Po. 4476, First Tribune, care Burgoon-Matthews Electric Co.....Birmingham

ARIZONA
*HOWLAND, JOHN, Po. 18686, First Tribune, care Globe Light & Power Co....Globe

ARKANSAS
RUSH, J. C., Po. 1556V, First Tribune, care Rush Bros.....Hot Springs
(*Nicholas Lund, Po. 17257, Second Tribune)

CALIFORNIA
*FAGG, J. H., Po. 12212, First Tribune, care Pacific Gas & Electric Co....Stockton
(*A. F. Flanagan, Po. 12213, Second Tribune.)
GOULD, T. A., Po. 18057, First Tribune, care Redondo Home Telephone Co.....Redondo Beach
*LANDIS, H. G., Po. 288, First Tribune, care Landis Electric Co., 941 8th St., San Diego
(*H. B. Steventon, Po. 14643, Second Tribune)
(R. C. Cavell, Po. 14627, Second Tribune)
(Henry Mellman, Po. 9392, Second Tribune).....Oakland
*NIGHTINGALE, E. L., Po. 18072, First Tribune, care General Electric Co., 724 Spring St.....Los Angeles
(F. J. Airey, Po. 1266, Second Tribune)
*ROWE, A. E., Po. 995, First Tribune, care Telephone Electric Co.. .....San Francisco
*(Edwin R. Brown, Po. 7715, Second Tribune)
*TOBEY, J. O., Po. 12226, First Tribune, care Pacific Gas & Electric Co.....Sacramento
*(H. F. Schultz, Po. 14914, Second Tribune)

COLORADO
*BURNITE, T. B., Po. 3426V, First Tribune, Boston Bldg.....Denver
(*H. S. Sands, Po. 1708, Second Tribune)
PAUL, CLARENCE M., Po. 4942, First Tribune, care Trinidad Gas & Electric Supply Co.....Trinidad

CONNECTICUT
*LOUWIEN, H. A., Po. 19696, First Tribune, care Danbury & Bethel Gas & E. I. Co.....Danbury

DELAWARE
*SHELDON, H. E., Po. 14400, First Tribune, care Wilmington & Philadelphia Traction Co.....Wilmington

GEORGIA
(Geo. E. Watts, Po. 12482, Second Tribune).....Atlanta

IDAHO
DOVERY, C. G., Po. 10241, First Tribune, care Idaho Power Co.....Twin Falls
(J. O. Blackstone, Po. 15318, Second Tribune)

ILLINOIS
BAUM, B. E., Po. 19260, First Tribune, care Vermillion County Telephone Co.....Danville
BROWN, EDWIN C., Po. 5278, First Tribune, care Galva Electric Light Co...Galva
(Chas. E. Broderick, Po. 1154, Second Tribune).....East St. Louis
GREEN, WM. A., Po. 13279, care Green Electric Co., 315 South Jefferson St...Peoria
(Jas. R. Downs, Po. 13277, Second Tribune)
KETTRON, C. W., Po. 16416, First Tribune, President, Illinois Elect. Porc. Co.....Macomb
(James R. Massey, Po. 8939, Second Tribune).....Springfield
MORSE, CHESTER A., Po. 14611, First Tribune, care Central Public Illinois Service Co.....Mattoon
(Donald R. Truax, Po. 14617, Second Tribune)
*NELSON, A. L., Po. 15384, First Tribune, care Commonwealth Edison Co..Chicago
(*W. H. Colman, Po. 3040V, Second Tribune.)

INDIANA
HARRIS, A. B., Po. 14154, First Tribune, 570 Washington St.....Gary
*LOUTH, M. E., Po. 16419, First Tribune, care Globe Stove & Range Co...Kokomo
*VICTOR, H. R., Po. 4857, First Tribune, care Varney Electrical Supply Co., 235 South Meridian St.....Indianapolis

IOWA
*ABELL, C. S., Po. 3952V, First Tribune, 419 Main St.....Keokuk
FLACK, FRANK W., Po. 13979, First Tribune, care Iowa Ry. & Light Co..Coon Rapids
McINNERNEY, B., Po. 1400, First Tribune, care Kimball Bros. & Co..Council Bluffs
(E. S. Damon, Po. 1398, Second Tribune)
MURPHY, J. E., Po. 15800, First Tribune, care Murphy-Dunham Co,.Sioux City

KANSAS
*CARR, J. E., Po. 16506, First Tribune, 446 S. 7th St.....Salina
*(M. L. Derge, Po. 9616, Second Tribune)
CATES, WILLIAM C., Po. 17862, First Tribune, care Cates Electric Co...Hutchinson
HARVEY, J. L., Po. 6546, First Tribune, care General Electric Co., 945 Emporia St.....Wichita
(Charles A. Stanley, Po. 9690, Second Tribune)
HUBBARD, HARVEY B., Po. 17623, First Tribune, care Hubbard Electric Co..Beloit
*MAGRUDER, H. W., Po. 15816, First Tribune, care Liberal Light, Ice & Power Co.....Liberal
*WRIGHT, E. A., Po. 15827, First Tribune, care Great Bend Water & Electric Co.....Great Bend

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ADAMS, F. C., Po. 18315, First Tribune, proprietor, Adams Electric Co...Sulphur
BERRY, D. EARLE, Po. 8245, First Tribune, care Ruby House.....Owensboro
(C. C. Childers, Po. 15494, Second Tribune).....Louisville

LOUISIANA

JOUBERT, W. C., Po. 16467, First Tribune, 409 Main St.....Baton Rouge
*LEVY, FERDINAND, Po. 6696, First Tribune, care Interstate Electric Co., New Orleans
*(T. N. Lide, Po. 3925, Second Tribune)
MCCONNELL, JOHN J., Po. 17031, First Tribune, care Rayville Light Plant..Rayville
*SWANN, L. A., Po. 2730-100, First Tribune, care Lake Charles Railway & Light Company.....Lake Charles
(*J. A. Landry, Po. 127, Second Tribune.)
WILLIAMS, J. A., Po. 5053, First Tribune, care Southwest Gas & Electric Co.....Shreveport
(H. E. Cahn, Po. 13025, Second Tribune)

MARYLAND

(Stanley B. Prather, Po. 1650, Second Tribune).....Baltimore

MASSACHUSETTS

(Kurt R. Sternberg, Po. 7612, Second Tribune).....Springfield

MICHIGAN

*AVIS, C. J., Po. 10086, First Tribune, care Southern Michigan Light & Power Co.....Morenci
*BURCHARD, C. A., Po. 19049, First Tribune, care B. H. & St. Joe Ry. & Light Co.....Benton Harbor
(*Earl Frakes, Po. 15528, Second Tribune)
*CUDAHY, J. D., Po. 16321, First Tribune, care Consumers Power Co....Kalamazoo
(*L. W. Brown, Po. 16319, Second Tribune.)
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St.....Traverse City
MCCLOY, A. S., Po. 11051, First Tribune, care Stevenson Hotel.....Detroit
(J. T. Pearson, Po. 11210, Second Tribune)
*MARBLE, CHARLES M., Po. 13961, First Tribune, 67 College St.....Battle Creek
(*L. R. Greusel, Po. 10918, Second Tribune)
SCHAGANE, P. F., Po. 13871, First Tribune, 617 South Saginaw St.....Flint
(L. G. Copeman, Po. 7219, Second Tribune)
*THORNE, JOHN J., Po. 14749, First Tribune, care Throne Electric Co.....Bay City
(*Samuel Ball, Po. 19542, Second Tribune.)
*TROMBLEY, GEORGE, Po. 14750, First Tribune, care Trombley Electric Co., 130 N. Jefferson St.....Saginaw
(*A. B. Brow, Po. 14737, Second Tribune, 228 South Weadock Ave).....Saginaw
WATSON, GEO. H., Po. 12848, First Tribune, care Consumers Power Co., 124 Monroe St.....Grand Rapids
(R. H. Vandermass, Po. 16484, Second Tribune)

MINNESOTA

*ANDERSON, EMIL, Po. 7805, First Tribune, 239 Plymouth Building....Minneapolis
(*Paul Joyslin, Po. 1254, Second Tribune.)
*GRIMES, W. A., Po. 761, First Tribune, care Northern Electric Co.....Duluth
(*F. A. Johnson, Po. 8192, Second Tribune)

MISSISSIPPI

*BRANDLI, H. E., Po. 15617, First Tribune, care Meridian Light & Power Co.Meridian
(*Chas. M. Rogers, Po. 14485, Second Tribune)
GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co.....Gulfport
*MCANGE, W. N., Po. 16854, First Tribune, care Southern Telephone & Telegraph Co., Telephone Building.....Corinth
NEWBILL, HOMER J., Po. 16855, First Tribune, Box 413.....Tupelo

MISSOURI

*BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co.....Marshall
(G. E. Michel, Po. 9061, Second Tribune).....St. Louis
FOX, CHAS. D., Po. 18163V, First Tribune, care City Light Plant.....St. Joseph
(S. W. Beale, Po. 6840, Second Tribune)
*FUNSTEN, F. L., Po. 3043, First Tribune, 1113 Wyandotte St.....Kansas City
(*A. D. Barber, Po. 1850, Second Tribune.)
(A. M. Grall, Po. 4112, Second Tribune).....Joplin
*NIENHAUS, J. V., Po. 19219, First Tribune, care Perry County Public Utilities Co.....Perryville
*WALKER, A. H., Po. 17669, First Tribune, care Walker-O'Byrne Electric Co.....Springfield
(*Arthur Prager, Po. 16105, Second Tribune)

NEBRASKA

BURLEY, W. B., Po. 10291, First Tribune, 318½ West Koenig St.....Grand Island
(J. D. Whitmore, Po. 1409, Second Tribune)

NEW JERSEY

ALEXANDER, JOHN P., Po. 11892, First Tribune, Broad St. Bank Bldg....Trenton
COX, W. A., Po. 18960, First Tribune, care Public Service Electric Co...Newark
FEY, W. E., Po. 10120, First Tribune, care Diehl Manufacturing Co..Elizabeth
*PURINTON, A. J., Po. 9643V, First Tribune, care Atlantic City & Shore Ry. Co.....Atlantic City
(*Wm. Bach, Po. 14191, Second Tribune)
STORTZ, H. W., Po. 16450, First Tribune, care Edison Storage Battery Co..Orange
(J. B. Renwick, Po. 16445, Second Tribune)

NEW MEXICO

*HICKS, A. C., Po. 17978, First Tribune, care Albuquerque Gas & Electric Co.....Albuquerque
*ROBERTS, E. A., Po. 17980, First Tribune, care Public Utilities Co.....Carlsbad
SMITH, JAMES R., Po. 16107, First Tribune, care Raton Electric Light & Power Co.....Raton

NEW YORK

C. C. MacKenzie, Po. 2029, Second Tribune).....Syracuse
BURNS, JOHN H., Po. 870, First Tribune, care McCarthy Bros. & Ford, 41 Eagle St.....Buffalo
(L. F. Philo, Po. 774, Second Tribune)
*PELZ, GEO. V. W., Po. 18674, First Tribune, care New York Edison Co., 109 West 125th St.....New York
*(W. J. Moore, Po. 3136, Second Tribune).....New York
*RUSSELL, R. E., Po. 5561, First Tribune, care General Electric Co....Schenectady

NORTH CAROLINA

JONES, WM. T., Po. 5685, First Tribune, P. O. Box 405.....Fayetteville
SPEAKE, CHAS. L., Po. 16993, First Tribune, care Westinghouse Electric & Manufacturing Co.....Charlotte
*SPENCER, G. L., Po. 11366, First Tribune, 713 Chestnut St.....Greensboro
(*R. H. Milton, Po. 11371, Second Tribune)

OHIO

*ALLIS, CLARENCE L., Po. 13203, First Tribune, care Wooster Electric Company.....Wooster
BRAUN, W. A., Po. 14652, First Tribune, care Braun Electric Manufacturing Co.....Dover
*BULKELEY, W. V. C., Po. 17998, First Tribune, care Columbus Railway, Power & Light Co.....Columbus
*COCHRAN, J. E., Po. 15898, First Tribune, care Ohio Electric Co.....Lima
*COONEY, JAS. J., Po. 13184, First Tribune, care Toledo Railway & Light Co.Toledo
(*Alonzo W. Roush, Po. 12410, Second Tribune)
CRAIN, CHARLES E., Po. 6946, First Tribune, care Crain-Stuart Co.....Springfield
(Fred J. Green, Po. 6951, Second Tribune)
*DUNNING, R. S., Po. 16471, First Tribune, care Forest City Rubber Co., Cleveland
*FENTON, E. BURT, Po. 18446, First Tribune, care Northern Ohio Traction & Light Co.....Akron
(F. B. Steele, Po. 13451, Second Tribune)
*FOX, HORACE C., Po. 16361, First Tribune, care Massillon Gas & Electric Company.....Massillon
HENCH, L. W., Po. 7854, First Tribune, care Westinghouse Electric & Manufacturing Co.....Youngstown
(E. A. Sanders, Po. 9666, Second Tribune)
HURD, WILLIAM P., Po. 9798, First Tribune, care Northwestern Ohio Light Company.....Van Wert
(*Samuel E. Ringgold, Po. 10995, Second Tribune.)
LOEWE, P. M., Po. 3942, First Tribune, care Oberlin Gas & Electric Co..Oberlin
MILLER, E. G., Po. 13108, First Tribune, care Warren & Niles Telephone Co..Warren
(Marshall, W. J., Po. 10001, Second Tribune.)
MOYER, HAROLD, L., Po. 14386, First Tribune, 43 South New York St....Kenmore
PARKER, HERBERT L., Po. 905, First Tribune, care Conneaut Metal Works Co.....Conneaut
*ROHRBAUGH, C. L., Po. 18450, First Tribune, 1211 Carr St.....Sandusky
(*R. C. Beebe, Po. 18442, Second Tribune.)
(J. D. Witner, Po. 14412, Second Tribune)
SIMS, E. A., Po. 5968V, First Tribune, care Avery-Loeb Electric Co.....Newark
(F. C. Morrison, Po. 18630, Second Tribune)
SMITH, E. B., Po. 10596, First Tribune, care Coshocton Gas Co.....Coshocton
*SNYDER, ED., Po. 19753, First Tribune, care Ohio Brass Company.....Mansfield
(*H. S. Robeson, Po. 13200, Second Tribune).
*VAN WINKLE, FRANK D., Po. 12966, First Tribune, care Post Glover Co..Cincinnati
(*L. E. Trotter, Po. 3510, Second Tribune.)

OKLAHOMA

*CORKEN, O. K., Po. 19827, First Tribune, 213 W. First St.....Oklahoma City
(*A. L. Mullengren, Po. 18853, Second Tribune.)
HOWELL, EDWARD, Po. 7896, First Tribune, care Abernathy & Howell, Elks Building.....Shawnee
*RENTCHLER, C. E., Po. 6870, First Tribune, care Enid Electric & Gas Company..Enid
(*Lincoln Beerbower, Po. 1475, Second Tribune.)
*STRASSWEG, FRED A., Po. 19821, First Tribune, care Muskogee Gas & Electric Co.....Muskogee
(*Edgar M. Graham, Po. 19811, Second Tribune)
*WALKER, P. G., Po. 6871, First Tribune, care Tulsa Corporation.....Tulsa
(James M. Kinslow, Po. 16770, Second Tribune.)

PENNSYLVANIA

*FADER, W. L., Po. 2883, First Tribune, care Union Electric Co.....Pittsburgh
(*D. Paul Lockard, Po. 5788, Second Tribune.)
FERREE, L. L., Po. 18865, First Tribune, 1830 Regina St.....Harrisburg
KRISE, W. M., Po. 4823, First Tribune, Manager, Jefferson Electric Co Punxsutawney
LODGE, JOS., Po. 18869, First Tribune, 157 East Chestnut St.....Lancaster
MURPHY, WALTER R., Po. 14021, First Tribune, care Meadville Telephone Co.....Meadville
(Carl W. Wilks, Po. 10848, Second Tribune)
(W. T. Snyder, Po. 5128, Second Tribune).....McKeesport
REGER, THOMAS E., Po. 4637, First Tribune, 224 Seventh Ave.....Altoona
*ROUNDS, L. B., Po. 14528, First Tribune, care New Castle Electric Co., 19 Washington St.....New Castle
(*J. C. Chestnut, Po. 14873, Second Tribune)

SOUTH CAROLINA

DOUGLAS, JAS. A., Po. 16984, First Tribune, care Municipal Electric Plant Lake City
(T. A. Brookbanks, Po. 16460, Second Tribune).....Charleston

TENNESSEE

ALLEN, TERRY E., Po., 18838, First Tribune P. O. Box 185.....Jackson
*JONES, GRAYSON, Po. 13782, First Tribune, care Electric Equipment Co., 131 Eighth Ave., North.....Nashville
RUTLEDGE, C. B., Po. 2127, First Tribune, care Bluff City Electric Co...Memphis
(B. F. Myers, Po. 12911, Second Tribune)

TEXAS

*IRVINE, R. J., Po. 6251, First Tribune, care San Angelo Water Light & Power Co.....San Angelo
*COOPER, H. S., Po. 365, First Tribune, care Southwest Gas & Electric Co., 405 Slaughter Building.....Dallas
COPLEY, E. F., Po. 7073, First Tribune, care Central Electric Co.....Waco
(L. B. Gardner, Po. 11390, Second Tribune)
*FROST, F. G., Po. 4015V, First Tribune, care Houston Lt. & Pr. Co.....Houston
*KELSEY, L. M., Po. 11350, First Tribune, care S. W. Tel. & Tel. Co....Galveston
(*Robt. A. Wood, Po. 11038, Second Tribune)
LARABEE, R. W., Po. 1327, First Tribune, care Southwestern Electric & Machine Co.....El Paso
*MILLER, THOS. L., Po. 8766, First Tribune, 219 Poplar St.....Abilene
MONTGOMERY, JOHN G., Po. 11355, First Tribune.....La Marque
MUNROE, WALTER N., Po. 3085, First Tribune, care Texas Power & Light Co.....Paris
REID, BRUCE, Po. 18290, First Tribune, care Gulf Refining Co.....Port Arthur
(Edward T. Keck, Po. 18284, Second Tribune)
*SCOVILL, F. E., Po. 17, First Tribune, care San Antonio Builders Exch. San Antonio
(*C. G. Matthews, Po. 10662, Second Tribune)
SMITH, GEO. B., Po. 6649, First Tribune, 309 Guadalupe St.....San Marcos — Central Texas League — Lockhart, Luling, Seguin, New Braunfels, San Marcos
WRIGHT, J. A., Po. 2242, First Tribune, care Nunn Electric Co.....Amarillo

VIRGINIA

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(Peter Winston, Po. 1546, Second Tribune)
*MACLEARY, H. M., Po. 9725, First Tribune, 707 Washington St.....Suffolk
(*J. E. B. Holliday, Po. 17106, Second Tribune)
*PATRICK, W. A., Po. 19859, First Tribune, care Dupont-DeNemours & Co. Hopewell
(*G. C. Hurst, Po. 8931, Second Tribune)
WOODHOUSE, H. C., Po. 6618, First Tribune, 54 Bank St.....Norfolk

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WASHINGTON

(H. B. Pierce, Po. 7235, Second Tribune).....Spokane

WEST VIRGINIA

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(R. R. Fagin, Po. 9161, Second Tribune)
*WALKER, C. D., Po. 18092, First Tribune, care C. & W. Electric Co.....Huntington

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(*John Adams, Po. 12378, Second Tribune)
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(Holmes Ives, Po. 18253, Second Tribune)
*DUNHAM, A. W., Po. 7352, First Tribune, care Sun Ray Manufacturing Co..Oshkosh
*ENGSBERG, B. C., Po. 15985, First Tribune, care Light and Water Dept..Lake Mills
*PFEIFER, JOSEPH W., Po. 10981, First Tribune, care Henry Newgard & Company.....Milwaukee
(*W. R. Patton, Po. 1090, Second Tribune.)
LINKER, P. R., Po. 14302, First Tribune, care Wisconsin-Minnesota Light & Power Co.....La Crosse
(Dan. Whalen, Po. 16022, Second Tribune)
TESSIER, LEONARD, L., Po. 18823, care De Pere Electric Light & Power Co..De Pere
ROBERTS, ELMER D., Po. 10997, First Tribune, 308 Sixth St.....Racine
*SCHEURMANN, A. R., Po. 17653, First Tribune, 8 Main St.....Watertown
(*Walter O. Wickler, Po. 20000, Second Tribune)

CANADA

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(David Conn, Po. 11885, Second Tribune).....Lethbridge

MANITOBA

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(*G. J. Brown, Po. 5977, Second Tribune)

ONTARIO

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(C. B. Deeks, Po. 17101, Second Tribune).....Coniston
*COOKE, W. P., Po. 16714, First Tribune, P. O. Box 178.....Port Arthur

SASKATCHEWAN

SANGSTER, A. G., Po. 7496, First Tribune, 820 Fourteenth St., East...Saskatoon

SPAIN

EDDY, H. W., Po. 11105, First Tribune, care Riegos y Fuerza del Ebro S. A.
Apartado 491.....Barcelona

* * * *

JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, V. W. Shear, Po. 14399, 609 Flatiron Building.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, R. J. Hadlow, Po. 15530, care Electric Service Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, Edmond D. McCarthy, Po. 589-10, 41 East Eagle Street.

CHATTANOOGA—Wednesday, 12:00 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge, 1900 Continental & Commercial Bank Building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, Joseph C. Bowman, Po. 6275, care H. W. Johns-Manville Company.

CLEVELAND—Regular meeting, Thursday, 12:00 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12:00 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Railway, Power & Light Company.

DALLAS—First and third Mondays, Hotel Adolphus, 12:15 p. m. Secretary, E. E. Roessler, Po. 12128, P. O. Box 1506.

DAYTON—First and third Mondays of each month, 12:00 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Company.

DENVER—Wednesday, 12:15 p. m., Kaiserdorf Hotel. Secretary, R. Arnold Lewis, Po. 11514, care Edins Lamp Works.

DETROIT—Meetings Saturday, 12:30 p. m., Grill Room, Board of Trade. Secretary, R. J. Kirchner, Po. 5199, care General Electric Company.

EAU CLAIRE—First Monday each month. Secretary, E. C. Dearth, Po. 17144V, care Wis. & Minn. Light & Power Co.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna Street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur Hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Company.

GALVESTON—Meet on call. Secretary, Howard Jolly, Po. 16826, care Postal Telegraph Company.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Company.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Company.

INDIANAPOLIS—Monday, 12:15 p. m. Secretary, A. H. Smith, Po. 13580, care Ford Motor Car Company, 1315 East Washington Street.

KANSAS CITY—Third Friday each month, 12:15 p. m., Hotel Muehlebach. Secretary, T. R. Harber, Po. 18908, 1500 Grand Avenue.

LA CROSSE—First Thursday each month, Elks Club, 6:00 p. m. Secretary, Dan J. Whalen, Po. 16022, care Thill-Manning-Whalen Company.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Company.

LOS ANGELES—Wednesday, 12:00 m., Jahnke's Tavern, 534 South Spring Street. Secretary, Clifton Peters, Po. 12734, 108 Edison Building.

LOUISVILLE—Tuesday, 12:15 p. m., Hotel Henry Watterson. S. B. Storm, Po. 9781, care General Electric Company.

MANSFIELD—Date and place of meeting from Secretary, H. A. Waite, Po. 16625, care Federal Sign System.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel. Secretary, W. R. Murphy, Po. 14021, care Meadville Telephone Company.

MILWAUKEE—Second Tuesday each month, Hotel Plankington. Secretary, F. V. Ziekursch, Po. 16625, 436 Public Service Building.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second Avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

MUSKOGEE—Secretary, A. E. Farmer, Po. 19809, 544 N. 11th St.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Company.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne Street, New Orleans, La.

NEW YORK—First Wednesday each month, 12:30 p. m., Stewart's Restaurant, Park Place. Secretary, F. M. Feiker, Po. 17197, care Electrical World, Tenth Avenue and Thirty-sixth Street.

OKLAHOMA CITY—Monday, 12:15 p. m., Lee Huckins Hotel. Secretary, A. L. Mullergren, Po. 18853, care Berham Engineering Company.

PEORIA—First and third Saturdays of each month, 1:00 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Company.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon Street.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, R. Gray Jones, Po. 16094, care Cutter-Hammer Co.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's Restaurant, Kellog Street. Secretary, J. O. Roser, Po. 10412, care General Electric Company.

RICHMOND—Third Wednesday of each month, Business Men's Club. Secretary, L. E. Walker, Po. 6610, care Western Electric Company.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Company.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto Avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Company.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Ridpath, Po. 7739, 505 Rialto Building.

SPOKANE—First and third Wednesdays of each month, 12:00 m., Davenport's Hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Company.

STARK COUNTY—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

ST. LOUIS—Tuesday, 12:15 p. m., American Annex Hotel. Secretary, Geo. McD. Johns, Po. 9052, Room 401, City Hall.

ST. JOSEPH, MO.—Secretary, W. R. Thomas, Po. 1489, care American Electric Company.

TULSA, OKLA.—Monday, 12:00 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G. Walker, Po. 6871, 18 West Third Street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Company.

WATERTOWN, WIS.—7:00 p. m., last Thursday each month, New Commercial Hotel. Secretary, H. J. Hippler, Po. 20007, care Wis. Gas & Electric Co.

WICHITA—First and third Mondays of each month, 12:00 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Company.

WINNIPEG—Every other Thursday, 12:15 p. m., Fort Garry Hotel. Secretary, C. T. Kummen, Po. 15957, 386 Donald Street.

APPEAL FOR PATENT OFFICE EXAMINERS SENT BROADCAST

The following appeal has been issued from the office of the Secretary of the Department of the Interior:

February 21, 1918.

To the former examiners of the Patent Office, and to all professors or instructors in physical science, chemistry, and mathematics:

The Patent Office is today short in its examining force. This is due, in part, to a number of men who left to enter the war; in part, also, to the desertion from the Patent Office at this time of need of certain men who have gone into private practice. The number of examiners provided by law is barely sufficient to carry on the constantly growing business of the office. During the war the number of applications for patents has increased. Our force is now fifteen examiners short of the normal force. We have tried to fill this delinquency through the Civil Service Commission, and have failed. We have written to some of the universities for help and have obtained no new men.

Call As Emergency Measure

We wish now, as an emergency measure, to call back to the Patent Office those men who received part of their training in this office. The Army and the Navy have called their reserves into action, and we find that the scientific men of the country are equally entitled to be regarded as a Reserve Patent Corps. Therefore, we appeal to those who can devote even a year of their time to join this force in this emergency.

FRANKLIN K. LANE,
Secretary of the Interior.

J. T. NEWTON,
Commissioner of the Patent Office.

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THE JOVIAN

Volume Twelve APRIL, 1918 Number Five

Win-the-War Spirit in Business Letters

"See that a win-the-war spirit gets into your business letters" is the slogan of a movement launched today by the Department of Commerce to remind business men that the everyday business letter is a most effective instrument for creating confidence in the Government's war policies and for inspiring others with the determination to see the war through at any cost.

"The idea was first brought forward in connection with American business letters to foreign countries," said Secretary Redfield today. "The volume of our foreign business mail is very large. It reaches firms in all but the enemy countries. For the most part it is read by those who are for us, but you may be sure that it reaches many who doubt our success and many who are at heart against us. I am sure that every foreign business man who opens an American letter is quick to detect even the slightest indication of the writer's feelings on the conduct of the war and its outcome.

"It is of the utmost importance therefore that the American business letter breathe confidence in every line. If the manufacturer or exporter feels that he has a just grievance against restrictions imposed on his trade, by all means let him go right to headquarters and register as emphatic complaint as he feels is justified. But he certainly should not carry the matter into his business letters. It is sure to create an entirely erroneous impression in some minds.

"Let the American business man make known to the whole world that he is for this war and that he is going to see it through, regardless of inconvenience, loss of trade, loss of money, or anything else. Every manufacturer ought to be fearless in expressing his sentiments even though he may be writing to a concern whose sympathies he may suspect are not wholly with us. Don't give a foreign concern the idea that you are apologizing for your Government's restrictions or that you are chafing under them. Spread the impression, the absolutely correct impression, that over here we are backing this war unqualifiedly."

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

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Advertising rates on application

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HENRY L. DOHERTY, Po. 3208-33
Past Jupiter Fifteen, New York City.

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WHY SOME LEAGUES ARE ENJOYING SUCCESS

AS HAS frequently been mentioned by leaders in the Jovian Order, the Leagues offer an opportunity to the electrical industry in every city to put itself on a par or even to take the lead as an industry in both civic and industrial matters.

Look about you at the commercial prominence of the electrical and allied industries in your city. You will readily perceive that they form a splendid nucleus for a strong business organization, if they were joined together in one co-operative society.

That is the only if to the question. Where you have a Jovian League in your city and it is not operating effectively, or is not in the front rank of organizations, it is because the whole industry is not actively identified with it. The League offers a means of getting the industry together; it offers practical means of co-operation; it wields a power for harmony, based on the only practical harmonizing influence, the human element.

With this opportunity before them there are Leagues in a number of cities that take but a negligible part in civic and industrial affairs. They go along from month to month, year to year, apparently content to hold occasional meetings, while other organizations completely overshadow them in the industrial and civic affairs of their city.

In other cities Jovians have made their Leagues an active power in local affairs. They have gained the recognition of the press and city administrations as progressive, constructive bodies whose activities are potent factors in questions pertaining to the city's welfare. When any movement is launched the aid of these Leagues is always sought. Speakers of prominence who visit the cities where they are located, as well as local speakers who have important messages to deliver are always anxious to deliver addresses before their members. As organizations they have established reputations for progressiveness and activity.

Why this difference between Leagues?

There is just one answer. The full potential strength of the industry is actively identified with the Jovian Leagues of some cities, and only a portion of the industry is identified with the Leagues of other cities.

That means in the latter case, that there is either a division in the industry or some lack of harmony, which produces a condition of cross-purpose or a division of activity causing the industry to suffer because of the weakness of the League.

We also know that in some cities the electrical industry through the Jovian Leagues have full representation in the executive bodies of the Chamber of Commerce, or similar organizations; in other cities it either has no representation in those bodies or is represented by some member of the industry who acts independently and without the indorsement of the entire industry.

The Jovian Order has been striving for years to bring home to the electrical industry the great benefits that may be derived from unity and organization in matters of this nature.

Leagues that have succeeded in bringing into their organizations the various branches of the industry in their localities are now reaping the fruits of their labors, while those that have not put forth sufficient effort to bring abouf the full co-operation of the entire industry are still working at a disadvantage.

The Jovian Order offers to the electrical industry in every civic center a logical method of utilizing its full potential strength, and that logical method is the promotion of harmonious co-operation. It offers the means of bringing about unity, but the activity essential must be supplied by the entire local membership with particular emphasis upon all utilities.

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THE CLIQUE

MUCH has been written and said about the "clique" in organizations, and in some instances the criticism that has been heaped upon those who do the work by taking an active part in management is not without foundation. There have been instances where those who had assumed charge of organizations have resented, or discouraged others from active participation in their affairs. For that reason the "clique" idea is one that easily appeals to the imagination, and in its appeal to the imagination will be found its strength.

The idea that every organization is run by a "clique" merely because a few of the members do all the work is without foundation, and in addition to being without foundation it is a great injustice to the men who do all the work. In a majority of instances these men would gladly welcome assistance from other members of the organization, but they do not welcome destructive criticism, because in many instances they are devoting a great deal of time and attention to the work, putting into it sincere effort and, naturally, they do not feel they should be criticised by members who are not taking an active part.

There are very few men who would not welcome suggestions given in a constructive spirit. But the member who is not taking an active part in the affairs of his order or club should bear in mind that most suggestions require a certain amount of labor to work out effectively. An idea may be of benefit as a suggestion, but a plan worked out in detail with an offer of assistance in putting it into effect is a far better exhibit of real interest in the organization.

The best way to determine whether or not your organization is run by a "clique" is to make an offer to do part of the work. Suggest something that you believe would be of real benefit to the members and explain why you believe it would be of benefit.

There is a splendid chance that your suggestion will be taken up, and if you repeat the performance a few times you are pretty certain to soon find yourself actively identified with the "clique," and then it will not take you very long to change your opinion.

However, in case you make a suggestion and it is not adopted, do not jump at the conclusion that a discourtesy has been shown you. There is frequently a sincere difference of opinion concerning organization matters. Don't "quit" because one suggestion is "turned down." No man who has the interest of his club sincerely at heart will do that, and very few men who are willing to do something for an organization will have to go around begging for a chance.

A little exhibition of inclination to be of service is usually about the only qualification essential to become identified with the "clique." That connection once consummated will mean work, but it is usually well worth the price.

* * * *

ANNUAL MEETING MANUFACTURERS' ASSOCIATION

THE third annual convention of the Associated Manufacturers of Electrical Supplies was held in New York City at Delmonico's, on March 21, the attendance exceeding that of the two previous conventions.

The convention was called to order by H. B. Crouse, Po. 872, president of the Association, at 2 p. m.

General Secretary Charles E. Dustin submitted his report, which included a report of the 102 meetings held during the year.

J. J. Gibson, Po. 3218, chairman of the Committee of International Trade and Commerce, submitted his report on the work of that committee.

The report of Charles L. Eidlitz, Po. 703, in favor of trade acceptances was referred to the Board of Governors after some discussion.

R. E. Gallagher, Po. 708, chairman of the Nominating Committee, then submitted the following nominations for the Board of Governors, and they were elected by a unanimous vote:

Charles Blizard, Po. 11905, Philadelphia; D. R. Bullen, Po. 1178, Schenectady; W. B. Crouse, Po. 872, Syracuse; H. R. Holmes, East Liverpool, Ohio, and J. F. Kerlin, Po. 2398-78, Cleveland.

The complete personnel of the Board of Governors is as follows: A. W. Berresford, Po. 2375-40; Charles Blizard, Po. 11905; Leroy Clark; H. B. Crouse, Po. 872; L. W. Downs; D. R. Bullen, Po. 1178; J. J. Gibson, Po. 3218; E. B. Hatch, Po. 1191; W. R. Holmes; J. F. Kerlin, Po. 2398-78; J. W. Perry, Po. 15736; Warren Ripple, Po. 679; W. C. Robinson, Po. 3829; R. E. Salisbury, Po. 1204, and R. K. Sheppard, Po. 17059.

The following officers were elected for the ensuing year:
President, A. W. Berresford, Po. 237540, Milwaukee, Wis.
Vice-President, B. E. Salisbury, Po. 1204, Solvay, N. Y.
Treasurer, J. W. Perry, Po. 15736, New York City.
General Secretary, Charles E. Dustin, New York.
Counsel, Judge Thomas M. Debevoise, Po. 466, New York.

At the banquet following the convention, addresses were made by retiring President Crouse, who officiated as toastmaster, Robert K. Sheppard and Major Donald Guthrie of the First Canadian Contingent, British Army.

* * * *

ELECTRICAL WAR TRAINING COURSE

A WAR training course for electricians and telephone men needed for the United States Army has just been published by the Federal Board for Vocational Education. This course, it is planned, will be given to drafted men, enlisted and detailed on subsistence and pay to schools co-operating with the Federal Government in the preparation of mechanics and technicians for military service.

The course consists of thirty-six lectures and four class room, field and shop units on electric wiring, testing, motors and generators, and telephone work. The instruction book is known as Bulletin No. 9, and may be had free on application to the Federal Board for Vocational Education, Ouray building, Washington, D. C. Similar bulletins for training enlisted men in various trades have been prepared by the board and will be announced upon publication.

* * * *

AMERICAN AND ENGLISH INCOME TAXES

IN comparison with the tax levied in England on incomes our own income taxes are moderate, indeed.

In England the tax on incomes of $1,000 is 4½ per cent; in America nothing.

In England the tax on incomes of $1,500 is 6¾ per cent; in America nothing for married men or heads of families and 2 per cent on $500 for an unmarried man.

In England the tax on an income of $2,000 is 7⅞ per cent; in America nothing for a married man or head of a family and 2 per cent on $1,000 for unmarried men.

The English income tax rate also increases more rapidly with the growth of the income than ours, a $3,000 income being taxed 14 per cent; $5,000, 16 per cent; $10,000, 20 per cent, and $15,000, 25 per cent, while our corresponding taxes for married men are, respectively, two-thirds of 1 per cent, 1½ per cent, 3½ per cent and 5 per cent, and only slightly more for the unmarried, due to the smaller amount exempted, the rate being the same.

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Forty-one candidates were initiated at the Rejuvenation held in connection with this Joviation at Wilmington, Del., January 31. This was the second Rejuvenation held during the month. At the first twenty candidates were initiated

MARCH REJUVENATIONS

DALLAS,. TEXAS

JUST to show what a little co-operative effort will do, Jovians of Dallas put their shoulders to the wheel following a meeting of the Membership Committee at noon on March 18, and changed the number of candidates to be initiated from eleven at that time to forty-three at the time set for the Rejuvenation at 8 o'clock that evening.

They call the League members at Dallas "The Construction Crew," and when they were advised of the small number of candidates that had been reported at the luncheon meeting at noon they immediately put on their overalls and went forth on a mission of construction. When they began to march into the Rejuvenation hall in small groups, each with his captive or captives, it was soon evident that what had been expected to be but a small Rejuvenation was going to be an exceptionally large affair.

First Tribune H. S. Cooper, Po. 365, was the supreme generalissimo, in charge of the affair, and according to reports was rendered valuable assistance by such seasoned commanders as: R. S. Wakefield, Po. 2606; Harry G. Glass, Po. 2974; Fred M. Lege, Jr., Po. 131-96, and all members of the Degree Team.

The notable guests present were: Chas. W. Hobson, Po. 1. Past Jupiter One; Jupiter J. H. Strickland, Po. 30-103; A. D. Page, Po. 501, and F. N. Boyer, Po. 1176, St. Louis, Mo.

Jupiter Strickland was the speaker at the Joviation.

Harry G. Glass, Po. 2974, led in the number of candidates secured, with 17; Fred M. Lege, Jr., Po. 131-96, was second, with 8, and a number of other members brought in one or more.

The following Degree Team performed the initiatory ceremony:

Jupiter, J. H. Gilbert, Po. 7076; Neptune, D. G. Caldwell, Po. 4977; Pluto, Geo. H. Preston, Po. 19792; Vulcan, J. G. Barrett, Po. 3189; Mercury, H. S. Cooper, Po. 365; Hercules, F. B. Shannon, Po. 12132; Mars, F. W. Loomis, Po. 3238; Apollo, R. S. Wakefield, Po. 2606; Avrenim, J. E. Couch, Po. 214.

* * * *

MILWAUKEE

MILWAUKEE Jovians held a Rejuvenation and Joviation at Toy's Restaurant, on the evening of March 28, initiating four candidates.

The attendance was seventy-five.

Henry F. Trester, Po. 17656, presided as toastmaster of the banquet.

Among the speakers were Arthur Dunham, Po. 7352, Statesman-at-Large, and First Tribune, Oshkosh, Wis.; F. T. Andrae, Po. 7343; First Tribune Jos. Pfeifer, Po. 10981, and Carl Golin, Po. 12385V, Statesman-at-Large.

The principal speaker was Sergeant Major Jack Anderson, M. C., one of the fifty-two survivors of the original Princess Pat Regiment of Canada.

He gave a description of trench conditions and trench warfare.

From reports, special credit should be given Charles Brewster, Po. 15982, who was instrumental in securing the speaker and contributed much effort in making the Joviation a success.

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Personal Pointers

Consider this a window and the page the shade,
That when 'tis drawn you see the passing throng.
Look, now, upon this as a promenade
And in your mind observe the folks that pass along.

* * * *

Frank R. Coates, Po. 16242, president of the Toledo Railways & Light Company, Toledo, Ohio, was recently appointed first vice-president of the National Baseball Federation.

* * * *

C. M. Scott, Po. 19909, formerly Cleveland representative for the Detroit Fuse & Manufacturing Company, is now connected with the Western Electric Company at Cleveland.

* * * *

B. H. Ellis, Po. 704, treasurer of the Manhattan Electrical Supply Company, Chicago, was elected first vice-president of that company at its recent annual meeting of directors.

* * * *

V. L. Blanchard, Po. 10619, formerly special representative of the Brush Electric Company at Toledo, Ohio, has been made new business manager of the company at Galveston, Texas.

* * * *

Carl A. Wolfrom, Po. 13949, assistant operating manager of the Utah Power and Light Company, Rexburg, Idaho, has been promoted to the position of district manager for that company.

* * * *

C. I. Weaver, Po. 3813, formerly manager of the East Michigan Power Company, Jackson, Mich., has been appointed general manager of the Springfield (Ohio) Light, Heat & Power Company.

* * * *

Wm. C. Cates, Po. 17862, First Tribune, Hutchison, Kan., owner of the Cates Electric Company, has been called to the colors. He left March 20 for Kelly Field Aviation Camp, San Antonio, Texas.

* * * *

F. G. Cassara, Po. 20343, adjuster for the Southwestern Telephone & Telegraph Company, with headquarters at 521 Twenty-second street, was elected secretary-treasurer of the Galveston League at its meeting March 14.

* * * *

Robert A. Wood, Po. 11038, has resigned as new business manager of the Brush Electric Company at Galveston, Texas, to take charge of the Christian Science army camp work at the Texas camps and cantonments.

* * * *

D. T. Laylin, Po. 16472, has been appointed electrical engineer for the Standard Parts Company, of Cleveland. Jovian Laylin was formerly in charge of the electrical department of Strong, Carlysle & Hammond.

* * * *

F. E. Fletcher, Po. 2958, who formerly held the position of assistant manager of the Tampa (Fla.) Electric Company, has been made purchasing agent of the company, with headquarters at its general office at Tampa.

* * * *

Harry Reid, Po. 10989, president of the Kentucky Utilities Company, Louisville, Ky., has been elected president of the Interstate Public Service Company, Indianapolis, Ind., a subsidiary of the Middle West Utilities Company.

HARRY W. ALEXANDER, Po. 17191, Sixteenth Vulcan, Director of Publicity, The Society for Electrical Development, New York, who has resigned to become assistant to the president, American Writing Paper Company, New York and Holyoke, Mass. There are no vice-presidents in the new organization of the company, which is the largest manufacturer of high grade paper in the world. Jovian Alexander, one of the best known men in the electrical industry, takes to his new position a wide experience in sale promotion and trade development. As publicity manager for the society he organized and successfully directed the work of the local committees, and the publicity and sales work of both "Electrical Prosperity Week," 1915, and "America's Electrical Week," 1916, campaigns. Prior to going with the society in 1914 he was sales manager for the Federal Light & Traction Company, New York, a large syndicate public utility operating company. Earlier he was a financial and political writer on one of the leading Chicago newspapers. He takes with him the best wishes of a host of friends in the electrical industry

* * * *

L. A. Burnside, Po. 6538, who for the past six years has been manager of the Home Electric Company, Burlington, Iowa, has recently resigned to become associated with the Poling Electric Company, of Ottumwa, Iowa.

* * * *

Andrew Nelson, Po. 18422, is now connected with the Chicago district office of the Westinghouse Electric & Manufacturing Company. He was formerly with the General Electric Company at Minneapolis, Minn.

* * * *

Howard Jolly, Po. 18626, formerly manager of the Postal Telegraph Company at Galveston, Texas, and secretary-treasurer of the Galveston League, has been transferred to Oklahoma City, and made manager of the Postal Company's office at that point.

* * * *

C. McKew Parr, Po. 1788, general sales manager for the Hart & Hagerman Manufacturing Company, Hartford, Conn., has been granted an indefinite leave of absence by that company, to serve on the War Trade Board at Washington, D. C., as a volunteer worker.

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T. B. BURNITE, Po. 3426V, First Tribune Denver, whose Jovian activities are meeting with success. First Tribune Burnite was among those who held Rejuvenations during the January drive for new members

J. D. Todd, Po. 7968, First Tribune for Kansas City in 1917, and formerly connected with the Western Electric Company, has been appointed vice-president and manager of the Missouri Valley Electric Vehicle Company, electrical jobbers, 1417 Walnut street, Kansas City, Mo.

* * * *

Charles S. Mode, Po. 17502, has recently joined the sales organization of the Bright Light Company, which has succeeded the Bright Gas Mantle Company, 1828 Milwaukee avenue, Chicago. Jovian Mode has been connected with the Alter Light Company for the past fifteen years.

* * * *

W. F. Georges, Po. 1735, is now connected with the sales organization of the Trumbull Electric Manufacturing Company, making his headquarters at 114 Liberty street, New York City. Jovian Georges was formerly with the Western Electric Company at Cincinnati and at New York City.

* * * *

L. H. Gamp, Po. 15665, formerly in charge of the F. E. Newberry Electric Company, St. Louis, Mo., has organized a new company to be known as the Gamp Electric Company, to engage in the general construction business. The offices of the company are 1625-26 Chemical building, St. Louis, Mo.

* * * *

Philip S. Dodd, Po. 404, heads a new incorporation, the Dodd-DuBosque Company, which succeeds the J. D. Barnhill, Inc., 110 West Thirty-fourth street, New York City. The new company continues at the above address, engaging in the service of business investigation, sales plans and advertising.

* * * *

E. W. P. Smith, Po. 14580, consulting engineer for the Elliott Electrical Company, of Cleveland, has been transferred to the sales department of that company. He will still act in an advisory capacity to the shop and engineering departments. Jovian Smith was formerly City Electrician of Cleveland.

* * * *

W. D. Clark, Po. 7260, who a few months ago succeeded R. S. Dunning as secretary of the Cleveland Electric Club-Jovian League, has resigned to join the United States Naval Reserve Force. He will be stationed at the Cleveland Armory, East Thirty-sixth street and Carnegie avenue, for the next few weeks.

* * * *

F. M. Cockrell, Po. 17356, formerly with the McGraw-Hill Company, Inc., at Chicago, with headquarters at 1570 Old Colony building, has been appointed manager for the Electrical World and Electrical Merchandising for the Central States district, with headquarters at 657 Leader-News building, Cleveland, Ohio.

* * * *

H. E. Wagenknecht, Po. 18371, formerly manager of the new business department of the Light & Power Company, Janesville, Wis., is now in charge of the Cates Electric Company, Hutchison, Kan., of which he has assumed the management in the absence of Wm. C. Cates, Po. 17862, now in the Aviation Service.

* * * *

J. L. Kent, Po. 18482, has been appointed commercial manager of the Springfield (Ohio) Light, Heat & Power Company. He was formerly with the Consumers' Power Company, Grand Rapids, Mich. Jovian Kent is a graduate of the Ferris Institute and has been connected with the Hodenply-Hardy interests for about nine years.

* * * *

F. C. Marqua, Po. 19172, manager of the Southwest Bell Telephone Company, Kansas City, Mo., has resigned to become manager of the new business department of the Southwest National Bank of Commerce of Kansas City. Jovian Marqua is also vice-chairman of the young men's department of the Kansas City Chamber of Commerce.

* * * *

A. N. Richardson, Po. 16577, who during the past year has been connected with the Union Electric Light & Power Company, of St. Louis Mo., in construction work, and who was formerly general superintendent of the Kansas City Electric Light Company, has been appointed operating superintendent of the Illinois Northern Utilities Company, Dixon, Ill.

* * * *

Harvey T. O'Conner, Po. 16381, who has been connected with the Mahoning & Shanengo Railway & Light Company for the past sixteen and one-half years, and who has been appliance sales manager of the Electric Shop, Youngstown, Ohio, for the past two and one-half years, is now district appliance salesman for the Union Electric Company, Pittsburgh, Pa.

* * * *

Roy B. Woolley, Po. 19626, formerly sales manager for the Standard Electric Stove Company, Toledo, and lately connected with the American Ambulance Field Service, Verdun Sector, France, has succeeded Harry W. Alexander, Po. 17191, as director of publicity for the Society for Electrical Development, New York. Jovian Woolley was formerly connected with the McManus-Kelly Company, and the F. Bissell Company, Toledo.

* * * *

Leon O. Hart, Po. 2659, who has been connected with the Driver-Harris Company, Harrison, N. J., as electrical engineer, and later as assistant treasurer, was recently elected treasurer and a director of the company. Jovian Hart was born in Hoboken, N. J., in 1885, and is a graduate of Stevens University, Class of '07, in mechanical engineering. Following his graduation he was a cadet engineer with the Public Service Company of New Jersey for about a year.

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R. S. DUNNING, Po. 16471, formerly secretary of the Cleveland Electric Club-Jovian League, and more recently connected with the Forest City Rubber Company, is now secretary of the Graphic Arts Club, of Cleveland. It is a club made up of the Ben Franklin Club and the Fellow Craft Club, with headquarters in the Colonial Arcade. The club will have a large membership and strong financial backing, and will give Jovian Dunning a large scope for his ability which was in evidence while he was secretary of the Cleveland League.

* * * *

B. W. COWPERTHWAIT, Po. 18387, assistant general manager of the Northern States Power Company, Minneapolis, Minn., was elected president of the Minnesota Electrical Association at its annual convention in Minneapolis, March 13. Jovian Cowperthwait was born in Danbury, Conn. Upon finishing school he entered the service of the Danbury & Bethel Gas & Electric Company. In 1901 he left that company to assume the management of the Faribault Gas & Electric Company, Faribault, Minn. When the company was taken over by H. M. Byllesby & Company in 1909 he was appointed manager of the Faribault division of the company, which comprised thirty-four communities. He became assistant general manager of the company last year when its principal office was removed to Minneapolis.

* * * *

OBITUARY

E. H. LAKEMAN, Po. 15372, formerly general foreman of the interior wiring division, construction department of the Commonwealth Edison Company, Chicago, died March 11, at the age of sixty-four. Jovian Lakeman was born in England and entered the service of the Western Light Company in 1886 as a wireman. When the Chicago Edison Company was formed he was made wiring foreman, and was retired on a pension January 1, 1915. He was initiated a member of the Order at a Rejuvenation held in Chicago October 5, 1914.

* * * *

JOHN P. SPARROW, Po. 12026, chief engineer of the New York Edison plants, died at his home 279 East Sixteenth street, Brooklyn, Monday, March 18, at the age of fifty-eight years. Jovian Sparrow was born in Portland, Maine, and received his early education in the public schools of that city. He entered the Portland Company's locomotive and marine works as an apprentice in 1880. In 1888 he went to work for the Sprague Electric Company, and for two years acted as superintendent of the Sprague company in charge of the construction of electric railways. He was subsequently connected with the New Orleans Electric Company, the Edison General Electric Company and the Canadian General Electric Company, joining the staff of the Edison Electric Illuminating Company in 1895. He had been a member of the Order since 1913, having been initiated in New York City at a Rejuvenation held in October of that year.

* * * *

CHARLES GORDON WADDINGTON, son of E. H. Waddington, Po. 5176, Statesman-at-Large, vice-president of the St. Louis Jovian League, met his death by being struck by a descending elevator in the Western Electric Company Building in St. Louis, April 9. He was in his eighteenth year and had been in the employ of the Western Electric Company for a little over a year. During that time he had made many friends by his pleasant manner and congenial disposition. He was a member of the St. Louis Home Guards, and of the Triangle Club, an organization of the Baptist Church, with which he was affiliated. Funeral services were held at the Second Baptist Church in St. Louis and were attended by his company of the Home Guards and a large number of Jovians. Interment was at Newcastle, Pa., the former home of the family. The JOVIAN extends to Jovian Waddington and his family the sincere sympathy and condolences of the Order.

To Jovians Who Believe In Co-Operation

THE Editors of The JOVIAN believe in CO-OPERATION. We are anxious to co-operate with Jovian members and Jovian Leagues in every way possible, and for that reason we not only desire to hear of Jovian activities but we are always on the lookout for them to give them the proper publicity in the pages of the magazine.

Before we can do this, however, we must either be directly advised of these activities or indirectly hear of them in some way, and in this matter we want to enlist the services of the officers and members of the Order in every locality. We want your co-operation in making The JOVIAN a better magazine.

There is one thing that will improve it, and that one thing is MORE NEWS. To get more news we will have to have more reporters, and these reporters will have to be volunteers.

As you have no doubt noticed there has frequently been no write-up of Jovian activities from several cities in which there are Jovian memberships. In some instances Jovians in those localities have wondered why the activities of their League affairs were not given publicity. The answer is contained in two words, "No reports."

Of course we do not expect the members of the Order to go into the matter of reporting and take the time to make the write-up themselves. We realize that Jovians are busy with their own affairs. For that reason we are only asking you to co-operate with us to get the facts concerning Jovian activities and the activities of Jovians in your vicinity. We will make the write-up from these facts.

We cannot have too many reports of that kind and we will appreciate your assistance. Help us make The JOVIAN more interesting. And help us give your local membership proper publicity.

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NEWS OF JOVIAN LEAGUES

J. ROBERT CROUSE, Po. 260-8V, Past Jupiter Seven, who has charge of the Thrift Stamp Campaign in Cleveland and Cuyahoga County, Ohio. Past Jupiter Crouse has a number of Jovians on his committees and is getting splendid results

Chicago "What Illinois Is Doing for the Blind and How It Will Care for the Blind Soldiers from 'Over There'" was the subject of an address delivered before the Chicago League, March 7, by Charles E. Comstock, managing officer for the Illinois Division of Visitation of Adult Blind of the Department of Public Welfare. The speaker, who has been blind from childhood, told in his address how the society intends to care for such soldiers as may return to us with their sight gone. Not only will they be cared for, but they will be taught a trade to make them self-supporting.

President Rosseland announced the appointment of D. H. Wyre, Po. 11039, as chairman of the entertainment committee.

Bernard Flexner, member of the Red Cross Commission to Roumania, was the speaker of the day March 14, taking for his subject "Roumania and the War." His address was one of the most interesting the League has enjoyed this year. It was based on his experiences on his recent trip through Russia and Roumania as a Red Cross Commissioner. He stated that the peace Germany has forced upon Roumania is nothing more than the seed for future wars.

Announcement was made by Chairman Harvey of the entertainment committee that a stag would be held by the League on the evening of March 28.

March 21, former President of the League, H. A. Mott, Po. 17507, representing the advisory committee of the Electrical Industry for the State Council of Defense, announced that a new engineering regiment was about to be recruited from men subject to draft, especially those skilled in electrical trades.

Announcement was made by the president of the appointment of Fred B. Duncan, district manager for the Packard Motor, as chairman of the membership committee.

Prof. F. A. Rogers, instructor of physics at Lewis Institute, known as the "wireless wizard," was the speaker of the day. "Wireless Communication with Airplanes" was the subject of his address. The desire to hear more concerning his interesting subject was only curbed by the thought that he could not tell more without devulging secrets with respect to the recent developments in the work of communicating with airplanes in flight.

* * * *

Kansas City The Kansas City Jovian League held a joint meeting with the Rotary Club in that city at the Grand Avenue Temple, March 22. The speaker of the day was Harry Lauder, known as the stage's "greatest comedian," who is making patriotic addresses in addition to his regular engagements. Mr. Lauder's talk was directed principally against the German propagandists of the country, and he made a direct appeal to all loyal Americans to aid in stamping it out.

* * * *

Winnipeg A. T. MacIntosh, Provincial Secretary and organizer of the Boy Scouts, addressed an enthusiastic gathering of Jovians at the regular bi-weekly meeting of the Winnipeg League, March 7, on "Boy Scouts—What They Are and What They Do."

Tuesday, March 21, A. R. Morrison, Commissioner of Recreation, addressed the League, taking for his subject "The Need of Public Recreation in War Times."

A silver bowling cup was donated by the League through the generosity of the Canadian General Electric Company, Canadian Johns-Manville Company, Canadian Westinghouse Company, Great West Electric Company and the Northern Electric Company, as a prize for a bowling contest among the members.

The first contest took place March 1, with about fifty bowlers competing in the tournament.

The following team were the winners:

Louis Papineau, Po. 9757; W. S. Raymond, Po. 12671; J. H. Schumacher, Po. 4742, Captain; W. P. Trice, Po. 15124, and R. C. Ward, Po. 12876.

In addition to being given custody of the cup, each member of the team was awarded a gold bowling pin for their victory.

* * * *

St. Louis Captain G. M. Hanna, Canadian Army Medical Corps, who has been in active service in England and France, was the speaker at the luncheon meeting of the St. Louis League, March 5. He gave an outline of the work of the Medical Corps both in caring for the sick and wounded and in preventing the spread of disease. He also described the operation of hospitals, sanitation and the difficulties under which it was frequently necessary for the Medical Corps to work.

H. H. Humphrey, Po. 9051, former president of the League, presided as chairman of the meeting.

A joint meeting with members of the Rotary Club was held March 12. The speaker of the day was Joseph W. Folk, former Governor of Missouri, who took for his subject "A Free City," and dealt with the railroad rates being charged by the railroad companies.

The Wesco Supply Company was in charge of the luncheon meeting of March 19, Charles Scudder, Po. 1078, president of the company, presiding as chairman.

W. L. Goodwin, Po. 1038, author of the "Goodwin Plan" of merchandising, was the speaker, and pointed out some of the evils existing under the present system of distributing electrical merchandising.

The League accepted an invitation extended by the Rotary Club to hold a joint meeting March 26, at the Statler Hotel.

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Harry Lauder was the speaker of the day and made a stirring patriotic address, in which he bitterly denounced the spreading of German propaganda.

The attendance at the meeting was over 500.

* * * *

Cleveland An unusually large number were present at the meeting of the Cleveland League, March 7. The speaker of the day was Victor Morgan, editor of the Cleveland Press, who took for his subject "Germany Today." Mr. Morgan has recently returned from Switzerland, where he was sent by his paper to get first-hand information of conditions. His description of his experiences was unusually interesting.

Announcement was made of an intersectional meeting of the American Institute of Electrical Engineers to be held in the League rooms March 8.

Alexander Hadden, Judge of the Probate Court of Cleveland, addressed the League March 14 on "The Workings of the Probate Court." He took as an illustration the case of a young married couple and followed their trials and tribulations through life, showing how the Probate Court solved their problems when they were compelled to call upon it for assistance.

Immediately following the address the 135th Regiment Band from Camp Sheridan, Montgomery, Ala., gave a short concert in the lounge room of the club.

On the evening of March 10 the National Lamp Works gave a musical concert to the members of the League.

"German Propaganda in South America" was the subject of an address by A. C. Gilbert, of the Cleveland Trust Company, at the luncheon meeting March 21. He asserted that Brazil and Argentine had been honeycombed by the Germans with the object of gaining control of South American commerce. He stated that the Germans had made extensive plans to ignore the Monroe Doctrine and appropriate South America as a field for the development of German commercialism.

Professor H. E. Bourne, of the Western Reserve University, addressed the League March 28. His subject was "Some Consequences of the Collapse of Russia."

A high-class concert was given in the League rooms by the Cleveland Electric Illuminating Company, Sunday, March 24. This completes the four concerts given by large concerns represented in the League's membership.

* * * *

New York One hundred and fifty-eight members and visitors were in attendance at the luncheon meeting of the New York League, March 13. President J. M. Wakeman, Po. 524, presided and addressed the members on the subject of the forthcoming Liberty Loan.

Mr. Isotel, a volunteer "Four Minute Man," gave an interesting talk.

L. L. Strauss, Po. 8698, treasurer of the League, reported the sale of a goodly number of War Savings Stamps during the meeting.

The speaker of the day was the new Police Commissioner, Hon. Richard E. Enright, who described the regular duties of the New York City police, and in addition gave some astounding figures concerning the sale of Liberty Bonds by the police, their sales aggregating $1,600,000, and members of the force purchased $1,750,000 worth.

"In most cases," he asserted, the police sold to people who would not have otherwise bought.

He also described the work the department is doing in the sale of thrift stamps, and how members of the force raised thousands of dollars by popular subscription to distribute to the extremely poor during the recent coal crisis in the city.

Commissioner Enright has served for twenty-two consecutive years upon the police force of New York, and is the first policeman ever appointed to the position of commissioner.

Akron, Ohio The Akron League held an interesting meeting in the Auditorium of the Chamber of Commerce on the evening of March 15.

J. C. Lincoln, of the Lincoln Electric Company, Cleveland, made an interesting address on "Electric Welding". He was followed by Hon. I. S. Myers, Mayor of the City of Akron, who made a brief address on civic conditions.

E. Burt Fenton, Po. 18446, president of the Akron League, presided as chairman of the meeting.

Thirty members of the League, with their friends and visitors from other cities, made up the attendance.

* * * *

Houston, Texas E. E. Sands, city engineer, was the speaker at the luncheon meeting of the Houston League, held at the Rice Hotel, April 1. His address was on the subject of the sewerage disposal plants recently installed in Houston, and contained a great deal of interesting data.

David Daly, Po. 366V, president of the Houston League, presided as chairman. In introducing the speaker, Jovian Daly discussed the engineering features that were carried out in the construction of the disposal plant, pointing out the advantages it possessed over similar plants that used a different method of operation.

As a co-operative feature, originated by Statesman H. O. Clarke, Jr., Po. 6629, a number of the electrical firms of the city took sufficient advertising space to fill a page in one of the daily papers on which the report of the League's activity appeared.

This is to be a permanent feature followed as part of the League's activity each month.

* * * *

Globe, Ariz. Globe Chartered Jovian League No. 32 lays claim to the title of being the smallest Chartered League in the Order in the number of membership. But it does not lay claim to small activity. Formerly there was only one Jovian in Globe; now there are sixteen. They are planning a Rejuvenation to be held in the very near future and, judging from past performances, it is pretty safe to say the Globe League will consign the low membership position to some other.

Whether it does or not, this much is certain, the members of the League are making its influence felt. The Elks held a carnival at Globe in March, during which the League aided in the drive for the sale of Thrift Stamps, selling $635.00 worth at their booth. They conducted a cabaret to which an admission of twenty-five cents was charged, and twenty-five cents was charged for refreshments. A Thrift Stamp was given with each ticket and each purchase.

Coming Conventions

Electrical Supply Jobbers' Association.
Annual meeting, Homestead Hotel, Hot Springs, Va., May 28-30. Secretary, Franklin Overbagh, 411 South Clinton Street, Chicago.

Electrical Contractors' Association of Georgia.
Annual meeting, Tybee Island, Ga., June, 1918. Secretary, Dan Carey, 614 Chamber of Commerce Building, Atlanta, Ga.

National Electrical Credit Association.
Annual meeting, June 1, 1918. Secretary, Frederic P. Vose, 1350 Marquette Building, Chicago, Ill.

Texas State Association of Electrical Contractors.
Annual meeting, Galveston, Tex., June 15, 1918. Secretary, H. S. Ashley, Fort Worth, Tex.

Southeastern Section, National Electric Light Association.
Annual meeting, June 19-20, 1918, Atlanta, Ga. Secretary-Treasurer, T. W. Peters, Columbus, Ga.

American Institute of Chemical Engineers.
Summer meeting, Berlin, N. H., June 19-22. Headquarters, Mt. Madison House, Gorham, N. H. Secretary, John C. Olsen, Brooklyn, N. Y.

Northwest Electric Light and Power Association.
Affiliated with N. E. L. A. Annual meeting, September 11, 1918. Secretary, George L. Myers, Pacific Power & Light Company, Portland, Ore.

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INSURANCE A

OVERHEARD

A FEW days ago we heard the following conversation between a neighbor and a salesman for a retail coffee store:

SALESMAN (showing sample): "Here is a splendid grade of coffee at thirty-five cents per pound."

NEIGHBOR: "It seems a good quality, but I am not in the market for any at present."

SALESMAN: "But you will need some shortly, and when you do I want you to try this of mine. You will not only find the quality good but the price is right. We buy it wholesale from the largest coffee importer in the city."

NEIGHBOR: "It seems all right and your price is reasonable, but I cannot consistently buy from you. However, I will be glad to recommend your coffee to my neighbors."

SALESMAN: "Oh, I see; you have a relative or a personal friend from whom you buy."

NEIGHBOR: "NOT EXACTLY, BUT I AM CONNECTED WITH AN IMPORTING FIRM MYSELF, GETTING MY SUPPLIES AT WHOLESALE AND MAKING A CONSIDERABLE SAVING IN THE COURSE OF THE YEAR.

JO
POLICIES AND
NOW A

Single Accident Policy
Double Accident Polic
Single Health Policy
Double Health Policy
A Single Accident an
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Clip and Mail the Coupon Today

As a Member of the Firm (
You Are Entitle

TODAY IS THE RIGHT TIM
INSURANCE FROM

IF YOU SO DESIRE, DATE YOUR APPLICATION TO TAKE EFFECT WHEN SOME OF YOUR PRESENT INSURANCE EXPIRES — PAY NOT UNTIL YOU RECEIVE THE POLICY.

THE JOVI

SYNDICATE TRUST BUILD

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T WHOLESALE

IAN
COMBINATIONS
AILABLE

	Annual Premium	Approximate Annual Savings
	$12.00	$13.00
	24.00	26.00
	20.00	15.00
	40.00	30.00
a		
	32.00	28.00
a		
	52.00	43.00
a		
	44.00	41.00
a		
	64.00	56.00

THE APPLICATION

YOU ARE connected with a concern (The Jovian Order) handling a commodity (Accident and Health Insurance), like this neighbor is, and you are entitled to buy your protection at wholesale, stripped of the selling expense, which forms the bulk (figured at 52 per cent by a number of the leading companies) of the premium asked by the standard insuring concerns.

As a member of The Jovian Order, that has assumed or eliminated the insurance selling cost (solicitation and collection of premiums) to its members, you are not only entitled to this big saving in accident and health insurance, but you are performing a patriotic duty when you take advantage of it.

In other words, you can buy Jovian Insurance at cost and make your dollar reach farther—which is unusual in these troubled times.

The Jovian Policies are One Hundred Per cent Quality, and are without exceptions, assessments, or any other objectionable or questionable features.

Note the small costs and the large savings shown in the comparative table in the center of this page.

The Jovian Order)
to These Wholesale Prices

TO BEGIN BUYING YOUR
OUR OWN CONCERN

N ORDER

NG ST. LOUIS

EVERY DOLLAR YOU INVEST IN JOVIAN INSURANCE, RELEASES NEARLY ANOTHER DOLLAR FOR YOUR OTHER PRESSING NEEDS.

Sign—Tear Out—Mail NOW!

THE JOVIAN ORDER

GENTLEMEN:

Send me complete information relative Jovian Accident and Health Insurance at greatly reduced rates.

(Signed) .....

(Address) .....

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The Return Circuit

Edited by W. R. Joyes, Po. 13813.

Without Malice

By W. R. J.

HE would not speak an evil word
Of any fellow man he knew,
And if by chance some ill he heard,
He said, "perhaps it is not true."

He never sought to see the wrong
In those his life was cast among;
He shunned the gossip of the throng,
And to his faith in folks he clung.

To some he seemed too circumspect
Because he did not care to see
The evil things some folks suspect
Exist in each community.

For when the whispering gossips flung
Malicious tales about the town,
No evil words from off his tongue
Would come to pull a mortal down.

The rabble said, "He is afraid
To speak a word when it offends."
This much we know, his prudence made
For him a host of loving friends.

* * * *

Essays On Things We Are Looking For

FUN

FUN is the collection of diversified amusement, and includes in its possible range of operation everything from tying a tin can to a dog's tail to recalling what Sherman said about war.

What is fun for one man may be monotony for another.

For that reason the funniest thing in the world is to observe what other people consider fun.

The country man seeks for it in the city among the tall buildings, revolving doors, buzzing trolley cars and bright lights, while the city man tries to round it up along the muddy banks of streams way out in the country, or by parading through rough, unkept fields disturbing the peace and tranquility of the rabbits and other live stock.

Mr. Million Bucks loads himself up with part of a ton of golf timber, slashes, sweats, swears and comes in and lies about his performance, while Mr. Small Salary separates himself from two bits, planks himself down on an unsympathetic bleacher seat in the sun when it is hot enough to melt the toes off a brass monkey, squalls until he is blue in the face, and commits innumerable perjuries against an umpire with whom he hasn't the slightest acquaintance.

Both of these men call this fun. They actually believe it is fun, and it would be about as difficult to convince them it was not as it would be to convince a man at the zenith of a state of inebriety that he was not in the center of the Zone of Paradise.

For these reasons it would hardly be appropriate to classify fun as pleasure. Rather it seems to be anything that can be imagined to be pleasure.

The same analysis holds good concerning both sexes.

One of the highest forms of fun known to the gentler sex is the feat of tearing merchandise from each other at a bargain sale. This has also been found to be the most democratic form of amusement the ladies indulge in as evidenced by the fact that fleece from Mrs. Van Avenue's furs, scraps of Mrs. Flat Dweller's georgette waist and fragments of Jenny Panslinger's hair ribbon are found reposing peacefully together on the floor by the janitor who sweeps up the debris after the battles are over.

Fun, it would seem, is not so much what it is as what it is thought to be.

The rule about fun appears to be the way you get started in life. If you start to observe things from a comical angle you can get fun out of almost everything. If on the other hand you start to hyphenating everything you come in contact with a grouch and keep burnishing the hyphen you will not be able to see fun in anything.

* * * *

The Conductorette

By W. R. J.

MAUDE Mueller was a suffragette,
And also a conductorette.
She worked the buzzer on a car,
And closed the door with many a jar.
Beneath the talcum on her face,
No searching eyes a tan could trace,
And if by chance some moisture rose,
She put some powder on her nose.

The Judge's car was in the shop,
So Maudie's car he had to hop.
He handed Maude a dollar bill
And watched her change it from the till,
And then he softly said to her:
"I'll take a Seventh Street transfer."

Maude punched the ticket with much grace,
And let a smile flit o'er her face.
The Judge observed her beauty rare,
Also the color of her hair.
He saw her uniform was trim;
That she was neither stout or slim,
So as he sat upon a seat,
He tried again her eyes to meet.

And thus the Judge went riding down,
With dreams into the heart of town.
In passing out he heaved a sigh;
Maude smiled again as he went by.
Still dreaming when he reached the street,
He vowed again fair Maude he'd meet.
But when the next car came along,
He found his transfer was punched wrong.

Another Maude with smile as rare,
Asked him to pay another fare.
He grinned and dropped a jitney in,
With thoughts of what it might have been—
His words and thoughts we could not pen,
If those two Maudies had been men.

* * * *

Silence is golden. To speak wisely may not always be easy, but not to speak ill requires only silence.

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PRACTICAL LESSONS IN ELECTRICITY

LESSON THIRTY-SIX

HOW THE SYNCHRONOUS MOTOR WORKS—II

By TERRELL CROFT

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ARMATURE and field arrangement in actual synchronous motors is practically the same as that of alternating-current generators. That is, in the actual machines, the armature winding is not on projecting poles as in Fig. 1, but is held in the armature structure as shown diagrammatically in Fig. 2. The projecting-pole construction (Fig. 1) would work. But it is not economical of material or in operation. In the real machines the armature winding, which may have a number of coils, is distributed along in the inner face of the armature core in many slots—precisely as for alternating-current generators. But in explaining the operation of the machine it is much more convenient to study a simple elementary winding (Fig. 2) than an actual distributed winding. Hence, the diagram of the single-phase motor of Fig. 2, which has only one turn per coil, will be considered. The general principles to be outlined apply to all synchronous motors.

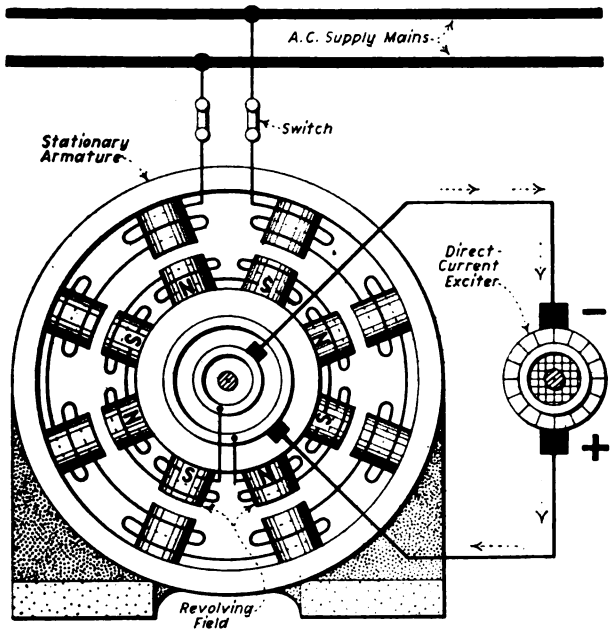

Fig. 1—Diagrammatic Illustration of an Eight-Pole Revolving-Field Single-Phase Synchronous Motor. (The speed of this motor would be, with a frequency of 60 cycles, 900 r.p.m., as shown in the example under the last Sect. in last month's JOVIAN.)

The operation of an alternating-current generator as a synchronous motor may be demonstrated readily in any power station where there are two alternating-current generators feeding in parallel into the same bus bar.

EXAMPLE.—Alternating-current generators G_1 and G_2 (Fig. 3) are operating in parallel. G_1 is driven by the steam turbine E_1 or by a steam engine of any other type and G_2 is driven by another engine E_2. Both are delivering power to the load through the feeders F. The wattmeters P_1 and P_2 indicate that both machines are feeding power to the line. Assume now that the steam to E_2 is shut off so that it cannot develop any power. It might be expected that G_2 would then slow down or cease rotating. But it will not. It will continue to operate—as a synchronous motor—at exactly the same speed as before. It will drive the engine.

If G_2 is a 12-pole 60-cycle machine, it will operate at 600 r.p.m. as a generator. It will also operate at exactly 600 r.p.m. as a synchronous motor while engine E_2 is being shut down and after it is shut down. (It is assumed that the speed of E_1 has not changed while E_2 is being or after it is shut down. The speed of an actual generator, G_1, would be held constant by the governor on the engine which drives it.) While G_2 is being thus driven as a motor by G_1, the wattmeter P_2 will indicate that G_2 is taking instead of delivering power. If G_2, now operating as a motor, is loaded its power consumption will increase as the load imposed

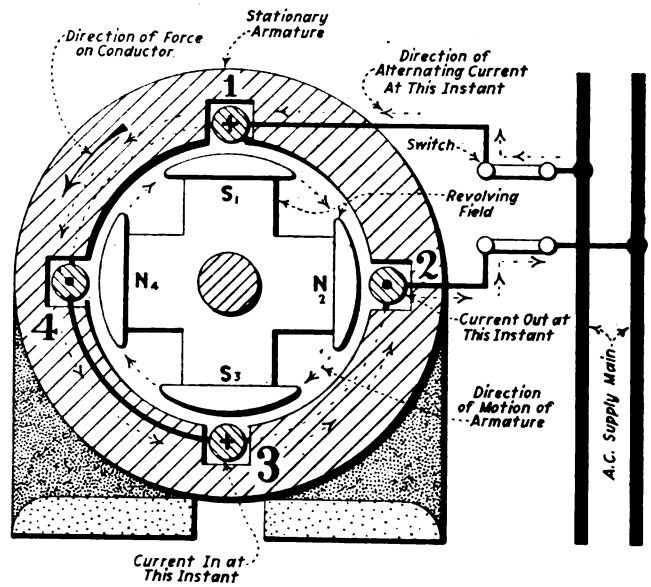

Fig. 2—Diagram of a Single-Phase Four-Pole Synchronous Motor Having its Armature Coils Wound in Slots. (The windings and collector rings on and the direct-current generator for exciting the revolving field are omitted to promote simplicity.)

on it is increased. The why of this state of affairs will be explained in a following paragraph.

Normal operation of synchronous motors is, as hereinbefore suggested, governed by the same underlying phenomena whereby all electric motors work. If a current-carrying conductor lies in a magnetic field the flux lines tend to "bunch" on one side or the other of the conductor (Fig. 4) as explained in the author's

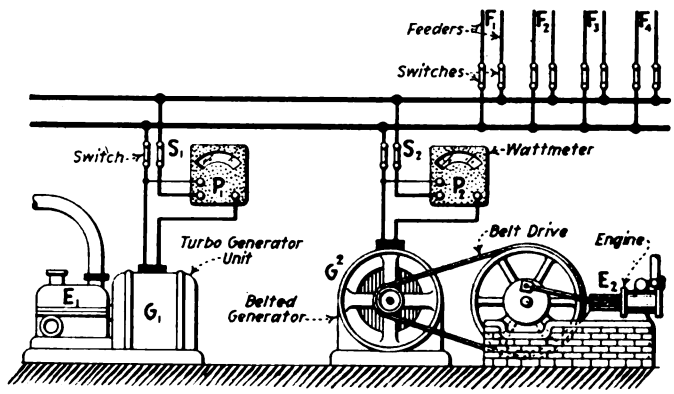

Fig. 3—Two Alternating-Current Generators Operating in Parallel

PRACTICAL ELECTRICITY. On which side of the conductor they will "bunch" is determined by the direction of the current in the conductor. This "bunching" of the flux lines tends to thrust the conductor from the field—just as if the flux lines were taut rubber bands. Or it tends to thrust the field from the conductor

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if the conductor is held stationary and the field is forced to move. The direction of the thrusts may be ascertained by the left-hand motor rule.*

Fig. 5 may be taken as representing an enlargement of a portion of the motor of Fig. 2. The field coils are excited by direct current in the coils *Cs* and *Cn*. Verification, with the left-hand

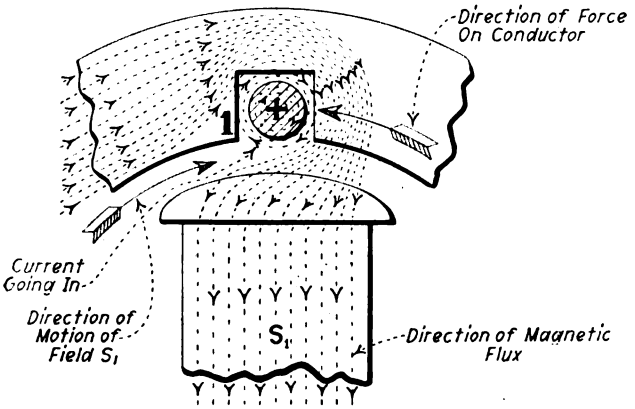

Fig. 4—Enlarged View of End of Inductor 1 and Pole S_1. (The effect of all other magnetic fields except 1 and S_1 are disregarded in this illustration.)

rule, will show that, at the instant pictured, the alternating armature current will be in the direction shown. The rotation of the rotor will be clockwise as indicated by the arrows in Figs. 2 and 5. The conductors imbedded in the armature frame cannot move. Hence, the rotor is forced to move. By the time the rotor has, due to the electro-magnetic interaction, been shifted through 180 electrical degrees—the distance between the centers of adjacent poles N_2 and S_1—the alternating current in the armature winding will have reversed in direction. Then the rotor will again be impelled onward from this new position. Thus continuous rotation is produced. This situation was explained in

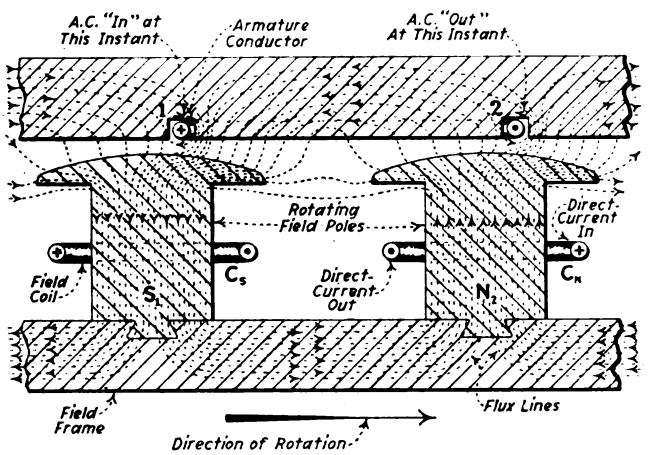

Fig. 5—Flux Distribution at a Given Instant in a Single-Phase Synchronous Motor Having One Slot Per Pole

the preceding lesson in the Section headed "Fundamental Operating Principles of the Synchronous Motor."

The similarity between the conditions which produce rotation in a direct-current motor and in a synchronous motor is an interesting thing to examine. In the rotating armature of any direct-current motor (Art. 520, PRAC. ELEC.) the current is always an alternating current. The current in each direct-current-armature conductor changes in direction during the interval elapsing while the conductor is passing through the distance between the adjacent poles on the stationary field structure. Adjacent poles are always of unlike polarity. The commutator on the direct-current machine changes the direct current of the line into alternating current in the armature. If the direction of the current in the armature conductors did not thus change the motor would not—could not—operate. Similarly, in a synchronous motor there is an alternating current in the armature winding. But it is delivered

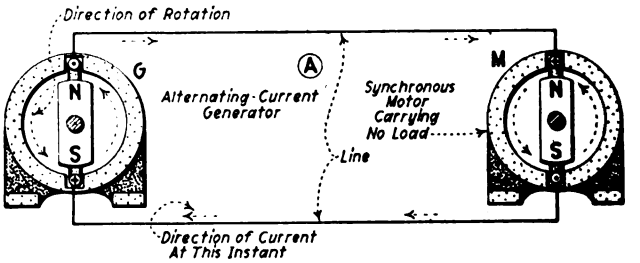

Fig. 6—Showing Relative Positions of Rotating Fields of an Alternating-Current Generator and a Synchronous Motor at a Given Instant. The Motor is Carrying no Load

to the motor as alternating current. Hence, no commutator is necessary. However, in most synchronous motors the armature is stationary and the field rotates. This construction is not essential, however, as any direct-current motor can be made to operate (but not efficiently) as a synchronous motor by adding collector rings to it as suggested in Figs. 386 and 387 of PRAC. ELEC.

How the synchronous motor regulates automatically its power input as the load it is pulling varies will now be explained. Its speed is constant—independent of the load. How then does it

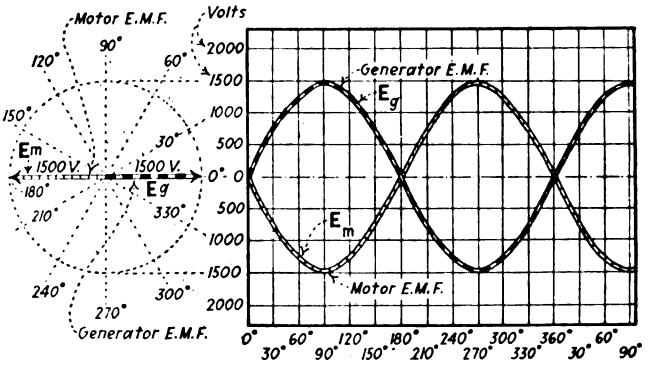

Fig. 7—Rotating Vectors and Graphs Representing Generator and Unloaded Motor Electromotive Forces in a Synchronous Motor Circuit

regulate its input current? The "phase shifting"* due to a change in the relative position of the rotor is responsible, as will be shown.

Consider a direct-current motor on a constant voltage circuit:—If an additional load is imposed on the machine its speed is decreased correspondingly. Its counter or motor e.m.f. is reduced

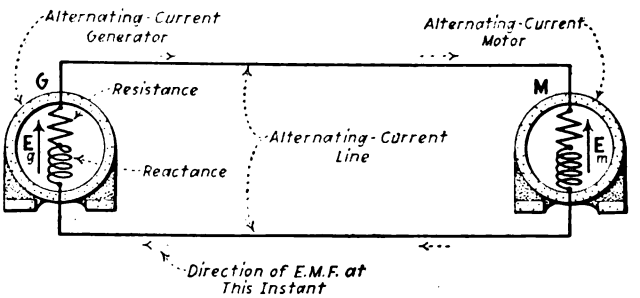

Fig. 8—Elementary Circuit of an Alternating-Current Generator Driving a Synchronous Motor

*See Art. 427 and Fig. 254, page 339, of the author's PRACTICAL ELECTRICITY:—"For a motor use the left hand. Turn it into such a position that:—*The first finger points in the direction of the flux. The middle finger points in the direction of the current in the conductor. Then the thumb will point in the direction of motion or equivalent motion of the conductor.*"

*"Phase shifting" is a change in the relative phases (Art. 685, PRAC. ELEC.) of the e.m.fs. developed by the motor and by the generator.

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(Sect. 631, PRAC. ELEC.). Thereby the line voltage or generator e.m.f. is permitted to circulate a greater current through the motor armature. Greater torque is developed. The motor continues to pull the increased load but at a decreased speed. A somewhat similar condition obtains with a synchronous motor. Consider a concrete case:—

EXAMPLE.—Fig. 6 shows a constant-voltage alternating-current generator, *G*, driving a synchronous motor, *M*, which is pulling

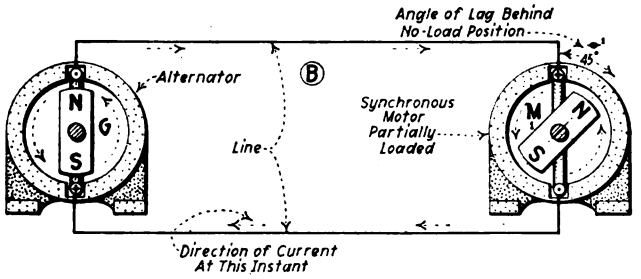

Fig. 9—Showing the Synchronous Position of the Revolving Field of the Partially-Loaded Synchronous Motor at a Certain Instant

no load. This picture represents conditions at one certain instant only because both the motor and generator are rotating at synchronous speed. Rotation of the field rotor of this motor is due to the electro-magnetic interaction hereinbefore discussed. Now the flux lines, from the rotor-field poles of the motor, cut, as it rotates, the conductors in the slots of the armature structure. Thereby an alternating e.m.f. of the same frequency as that of the supplying generator is induced in the armature conductors of *M*.

With no load on the motor and with its field suitably excited the "synchronous position"* of the motor field with respect to that of the generator field will be as shown in Fig. 6.

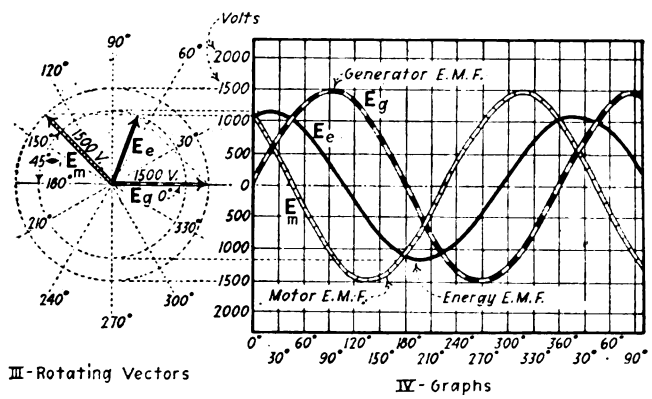

Fig. 10—Rotating Vectors and Graphs Representing Generator and Partially-Loaded-Motor Electromotive Forces in a Synchronous-Motor Circuit

The motor e.m.f. thus developed will (neglecting motor losses) be at every instant equal and opposite to the e.m.f. impressed by the generator. The motor e.m.f. induced by the motor attains its maximum value at the same instant that the generator induces its maximum e.m.f. This situation is revealed graphically by the phase diagram and graphs of Fig. 7. That the induced motor e.m.f., *Em*, will oppose the generator e.m.f., *Eg*, may be demonstrated by applying the right-hand rule (Art. 427, PRAC. ELEC.).

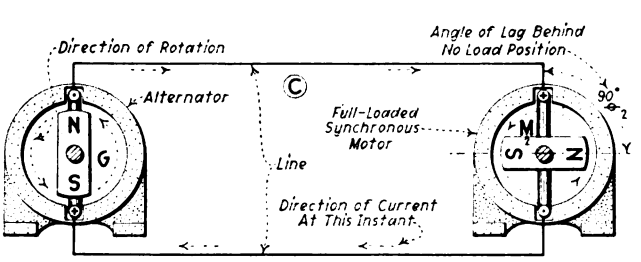

Fig. 11—Rotating Field of the Heavily-Loaded Synchronous Motor has Dropped Back to a Synchronous Position 90 Deg. Behind its No-Load Synchronous Position

*"Synchronous position" means that position which any definite point on the revolving member occupies at the same period or phase of each cycle of time. (W. I. Slichter, in PENDER'S HANDBOOK.)

Furthermore, by Lenz's law, any induced e.m.f. is always in such a direction that it opposes the e.m.f. which produces it. Hence, with no load under the conditions illustrated, the motor e.m.f., *Em* (Fig. 8) is, for all practical purposes, equal and opposite to the impressed e.m.f., *Eg*. The difference between them is zero. There is no available e.m.f. in the circuit. Therefore, no current can flow through the synchronous motor, *M*, and consequentially it, theoretically, consumes no power. (Actually, motor *M* must take sufficient power to overcome its no-load losses such as friction, windage, copper losses and the others. Consequentially, a

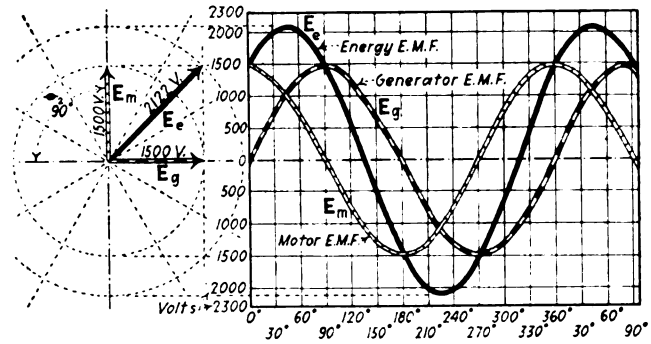

Fig. 12—Rotating Vectors and Graphs Representing Generator and Heavily-Loaded-Motor Electromotive Forces in a Synchronous Motor Circuit

small current *does* flow through the motor at no load. But the power and current thus taken are so small that they are relatively inconsequential and may in this discussion be disregarded).

If now a load is imposed on the motor *M* it slows down for an instant (only for an instant) and its field assumes a new synchronous position behind its no-load synchronous position. This is shown in Fig. 9, which represents conditions at a certain instant.

Now with this new synchronous position, the e.m.f. induced by the motor—the motor e.m.f.—attains its maximum a certain time interval later in each cycle than the generator e.m.f. attains its maximum. This lag angle between the motor and generator e.m.fs. may be represented by the angle Φ_1 in Fig. 9. If the motor back e.m.f. now induced be subtracted vectorially from the generator e.m.f. (PRAC. ELEC., Art. 731) as solved in Fig. 10—*III*, the difference will be the available e.m.f., *Ee*, which is effective in impelling current in the circuit. The interaction due to the flux of the motor fields S_1 and N_2 (Fig. 5) and the flux lines encircling the armature conductors, 1 and 2, produces a torque. This causes the field rotor to revolve at synchronous speed. Thus it carries its load.

If now an additional increase in load is imposed on the motor, its rotor will drop further back. It will assume a new synchronous

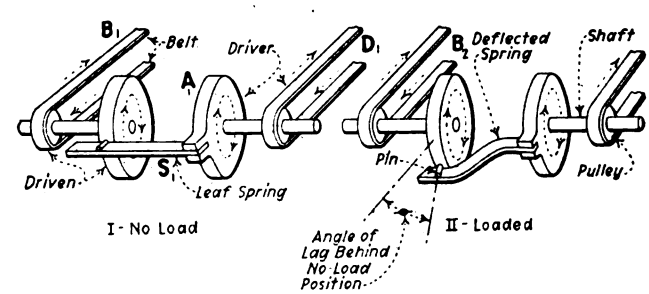

Fig. 13—Mechanical Analogy to the "Drop Back" With Increase in Load of the Synchronous Position of a Synchronous-Motor Rotor

position as diagrammed in Fig. 11. In this illustration the load is assumed to be of such magnitude that the new synchronous position is, as shown at Φ_2, 90 deg. behind the original one. The motor rotor now induces its maximum e.m.f. in each cycle 90 deg. later than the generator induces its maximum e.m.f. The e.m.f. now available for impelling current through the circuit is *Ee*, as exhibited in Fig. 12—*V*. Thereby a greater current is circulated in the circuit. The motor can then pull a correspondingly-greater—load at synchronous speed.

However, if the load imposed exceeds the capacity of the motor it will stop. With the angle Φ_2 90 deg. (Fig. 12—*V*) the power is then, theoretically, a maximum. Any additional load tending to further increase Φ_2 would cause the motor to drop out of step and stop.

Note particularly that while the synchronous position of the motor changes with change in load, its revolutions per minute

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does not change. A 900 r.p.m. synchronous motor will always operate at exactly 900 r.p.m. unless the load imposed on it exceeds its capacity. The maximum torque of the average synchronous motor is approximately six times its normal full load torque.

A mechanical analogy to the change of synchronous position of the synchronous motor rotor with change in load is given in Fig. 13. Assume a belt, D_1, is driving a disc, A_1, at a certain speed. There is now, so it will be assumed, no load on belt B_1. The power thus supplied will be transmitted through the leaf spring S_1 to the belt B_1 and thence to the load, if there is a load. When there is no load on B_1 the spring will be deflected only slightly—just enough that the friction of the driven mechanism may be overcome. But if a load is now imposed (as shown in *II*) on belt B_2, the spring will deflect through the angle Φ. However, it will continue to drive the load at the same speed of rotation as in *I*. In a similar way the relative synchronous positions of the field rotors of the alternator and motor (Fig. 6) change under load. But the speed does not change. If the load on B_1 exceeds the capacity of the leaf spring it will break down. Likewise, an overload on a synchronous motor causes it to drop out of synchronism and stop.

* * * *

THIS IS LABOR'S WAR

THIS is labor's war. No element of the people of this country, or of other countries, would suffer more than the workers from a German victory—a German peace.

What the Germans mean by a "strong peace," a "German peace," was recently expressed by Gen. Von Liebert, a leading Prussian conservative.

"For us there is but one principle to be followed, and we recognize no other. We hold that might is right. We must know neither sentiment, humanity, consideration, nor compassion. We must have Belgium and the north of France. France must be made to pay until she is bled white. We must have a strong peace."

Mr. Gompers spoke well for American labor when he said:

"The Republic of the United States is not perfect; it has the imperfections of the human—but it is the best country on the face of the earth, and those who do not love it enough to work for it, to fight for it, to die for it, are not worthy of the privilege of living in it.

"I say to the Kaiser, I say to the Germans, in the name of the American labor movement: You can't talk peace with the American workers; you can't talk peace with us; you can't talk to us at all now. We are fighting now. Either you smash your Kaiser autocracy or we will smash it for you."

The working men of America have a tremendous interest to serve, a vital cause to defend, a work of surpassing importance to accomplish. What is vital to them is vital to America and to the world. That they see their duty and the great mass of them are performing it with unimpeachable loyalty is a cause for congratulation to the nation and to the world.

* * * *

WEIGHING MILES

How much do 3,000 miles weigh? Answering this question, we may say that 3,000 miles weigh 5,000 tons, 10,000 soldiers, or a few hundred graves in France.

One of the first things taught us by the war is the meaning of imponderable values. Ships are like men in that they cannot be in two places at once. If they are somewhere in the South Atlantic bringing wheat to us, they cannot be in the northern sea lanes taking soldiers to Europe. Moreover, for every ship on the long haul to Argentina two are taken out from the shorter haul to France. It makes no difference how you figure it, by time or money, or wheat or soldiers. Every ton of wheat added to our store by transport from South America means double its life-giving value lost to the allies in Europe. Of course, we must all have our bread, but before we eat that extra and unnecessary slice we should be careful to figure out its cost.

NEW YORK LEAGUE HOLDS BIG LIBERTY LOAN MEETING

THE regular luncheon meeting of the New York League held at the Hotel McAlpin April 17, developed into the most patriotic affair ever held by New York Jovians.

Following the call to order by President James M. Wakeman, Po. 524, Fifth Apollo, a drive for Liberty Loan subscriptions was started, and within a few minutes it became evident that all previous records of the League were going to be broken. The final tabulation of subscriptions showed that $175,400.00 worth of bonds had been subscribed for during the meeting.

* * * *

FIRST MEETING OF WILMINGTON LEAGUE

THE enthusiasm with which Jovians are entering into the League work was clearly in evidence at the first luncheon meeting of the Wilmington, Del., League, held April 2.

In an inspiring address before the League, A. H. Cattel frequently drew applause from the audience. He paid a high tribute to those who promote unity and co-operation.

"One of the miracles of the great war," he said, "is the spirit with which people of countries which stand for modern liberty are going into the conflict and the great civilizing influence of the struggle upon all who have been affected by it. This war will be a tremendous amalgamating influence which will not cease for hundreds of years after it has closed."

Henry Irving Bowles, representing the Delaware Life Underwriters Association, spoke in the interest of the War Savings movement.

Following the meeting, First Tribune H. E. Shelton, Po. 14400, ordered a large supply of application blanks for a Rejuvenation to be held in May.

* * * *

CLOSE WATCH ON GERMAN TRADE PREPARATIONS

GERMAN preparations for trade after the war are being scrutinized carefully by experts in the Bureau of Foreign and Domestic Commerce, of the Department of Commerce, and the recent important report on the subject of "German Foreign-Trade Organization" by Chauncey D. Snow, which touched on this point, has been in such great demand as to establish a new sales record for Government trade reports.

Since the war eliminated Germany from world trade, the United States has improved its position in foreign markets in spite of the shipping shortage and other abnormal restrictive factors. American business must not make the mistake of seeing only one side of this situation and thus underestimating the German capacity for foreign trade nor the energy, application, and craft with which German business will address itself to the task of regaining favor in markets in which it once prospered.

In order to understand the significance of the information on German trade moves that will from time to time be made public, secretary Redfield counsels not imitation of, but familiarity with the German theories of foreign trade and the artful and formidable organization that with Government aid at every turn, has been built up in Germany during the last twenty years to dominate the world's markets. It was to meet the demand for such information that the Bureau of Foreign and Domestic Commerce issued the bulletin on "German Foreign Trade Organization." The unprecedented demand for it is taken as an indication that the American manufacturer is making after-war preparations of his own.

The Bureau now plans to get out a supplementary bulletin on German trade and preparations for the commercial future about the first of the year, and further supplements as rapidly as important additional information is received.

Department of Commerce, Bureau of Foreign and Domestic Commerce, Washington, D. C.

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Bookkeepers	2	26–35	High School	5–14 yrs.	$65–100	Anywhere.
Central Station Engineers	3	29–38	H. S.-Univ.	6–18 yrs.	$60–200	Anywhere.
Clerical	3	22–24	High School	2–10 yrs.	$75–125	Anywhere.
Commercial Laboratory Workers	1	29	Tech. School	11 yrs.	.....	Anywhere.
Construction Engineers	4	30–46	H. S.-Univ.	2–27 yrs.	$100–200	Anywhere.
Draftsmen	1	30	Tech. School	5 yrs.	$175	Anywhere.
Electricians	1	30	H. S.-Univ.	3 yrs.	$100	Anywhere.
Electrical Engineers	10	26–34	Practical-Univ.	5–20 yrs.	$125–300	Anywhere.
Engineers	5	28–40	Practical-Univ.	5–12 yrs.	$120–160	Anywhere.
Estimators	3	28–36	Practical	9–18 yrs.	$125–160	Anywhere.
Foremen	2	27–34	Practical	9–16 yrs.	$125–160	Anywhere.
General Managers	2	31–33	Practical	7–15 yrs.	$250–417	Anywhere.
Linemen	1	22	High School	5 yrs.	$90	Anywhere.
Managers, Commercial Department	1	34	Practical	12 yrs.	$200	Anywhere.
Managers, Contracting	2	26–36	College	5–16 yrs.	$125	Anywhere.
Managers, Jobbing House	2	32	College	13 yrs.	$2,400-10,000	Anywhere.
Managers, Office	3	26–32	High School	8–10 yrs.	$100–250	Anywhere.
Managers, Plant	11	30–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere.
Managers, Traffic	1	53	Practical	15 yrs.	$200	Anywhere.
Manufacturers Representatives	4	36–38	Practical-Tech	8–10 yrs.	Com.–$200	Anywhere.
New Business Managers	2	29–34	H. S.-Univ.	9–15 yrs.	$125–175	Anywhere.
Office Executives	3	25–36	Grade-Univ.	4–18 yrs.	$85–150	Anywhere.
Power Salesmen	1	36	Tech. Grad.	12 yrs.	$200	Anywhere.
Purchasing Agent	7	24–41	Grade-Tech.	4–21 yrs.	$80–200	Anywhere.
Sales Engineers	3	39–45	College-Univ.	9–20 yrs.	$100–200	Anywhere.
Sales Managers	6	28–45	H. S.-Univ.	4–17 yrs.	$150–300	Anywhere.
Salesmen	27	24–43	H. S.-Univ.	2–25 yrs.	$75–300	Anywhere.
Superintendents	10	28–44	H. S.-Univ.	3–15 yrs.	$125–300	Anywhere.
Telephone Engineers	1	35	H. S.-Tech.	15 yrs.	$200	Anywhere.
Welder (Acetylene)	1	33	High School	5 yrs.	$150	Anywhere.
Wiremen	2	23–25	High School	7–9 yrs.	$75–125	Anywhere.

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JOVIANS!

Can You Use Any of These Jobs?

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, are seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau. A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of any of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

239. Sales Engineer. Detroit electrical house has place for man with well-grounded electrical education, some selling experience, and who is not subject to draft.

240. Salesman—Estimator. Combination man wanted by Chicago time-recorder house; salary $1500 to $2000. Good opportunity.

241. Central Station Engineers
Electricians
Maintenance Man
} New York concern has need of all three classes of employes.

242. Steam Engineer. Opening with a small-town Missouri electric plant.

243. Salesman. One for city and one for road needed by northern electrical supply house.

244. Salesman. Road and city men wanted by St. Louis jobbing house.

245. Stock Clerk. North Carolina contractor will pay $60 to $65 for competent young man.

246. Salesmen. Large eastern electrical manufacturer wants man above draft age, familiar with standard apparatus.

247. Office Man. Large eastern electrical apparatus concern has need of man to handle correspondence. Must be familiar with low tension signaling apparatus.

248. Salesman. Large battery concern can use man for Kansas territory. Salary dependent on previous experience and ability.

249. Meter Man. Ohio public service corporation has need of man to take charge of meter testing department.

250. Office Manager. Minnesota electrical supply house is looking for man with some executive ability.

251. Superintendent
252. Estimator
} Large Ohio electrical supply house is looking for steady, reliable men, preferably with family, to settle down in good, paying positions.

253. Salesmen. Several men wanted by New York City electrical supply house, to cover New York State.

254. Maintenance Man. Opening in Oklahoma small town for man with practical experience in all electrical work connected with small plant. Immediate acceptance required.

255. Branch Store Manager. Man wanted in Kansas town to take entire charge of electrical contracting and fixture business; good salary and chance for promotion.

256. Sales Engineers. Three openings with Ohio branch of large eastern electrical apparatus manufacturer. Work requires application and sale of motor, generators, turbo-generators, etc., to industrial plants.

257. Advertising Manager. St. Louis electrical apparatus manufacturer wants man familiar with such matters, experienced not only in arranging copy, carrying on correspondence with publishers, but also with some experience in illustrating.

258. Manager. Competent general executive wanted by Michigan Municipal lighting plant of 2000 K. W. capacity, to take charge of power house work, outside line construction, and sales department. A good man rather than a cheap one is the object.

259. Superintendent. Philadelphia electrical apparatus manufacturer has need of man familiar with die work, machine work, and assembling of small electrical material.

260. Foremen
Wiremen
Electrical Engineers
Construction Engineers
} Ohio electrical supplies manufacturing concern can use men in all these branches of the business. Early application requested.

261. Estimator—Solicitor. Combination man wanted by New Jersey contracting concern. Must have had practical experience in figuring jobs, closing business, and selling motors. Salary $30 to $50 per week.

262. Salesmen. Kentucky electrical supply house can place man in southern territory.

263. Salesmen. New York manufacturer wants man to cover New York City and vicinity; not subject to draft, and one who has had experience in selling electrical lines; salary $1200 to $1800.

264. Estimating Engineer. Opening with Iowa contracting concern.

265. Salesman. New Jersey territory open for capable man; headquarters at Newark; electrical supply line; good salary.

266. Assistant Purchasing Agent. Large electrical specialty manufacturer will pay $80 to $125 for man familiar with materials used in electrical apparatus.

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CHARTERED JOVIAN LEAGUES

Cincinnati	Charter No.	1
Kansas City, Mo.	" No.	2
Pittsburgh	" No.	3
Minneapolis	" No.	4
St. Joseph, Mo.	" No.	5
Louisville, Ky.	" No.	6
Stark County Jovian League Comprising the towns of Massillon, Canton and Alliance, Ohio.	" No.	7
Tulsa, Okla.	" No.	8
Eau Claire, Wis.	" No.	9
Harrisburg, Pa.	" No.	10
Wichita, Kan.	" No.	11
Winnipeg, Man.	" No.	12
Bay City, Mich.	" No.	13
Milwaukee, Wis.	" No.	14
Port Arthur, and Fort William, Ont.	" No.	15
Oklahoma City	" No.	16
Galveston, Texas	" No.	17
Muskogee, Okla.	" No.	18
Mansfield, Ohio Comprising Richland and Ashland Counties	" No.	19
St. Louis	" No.	20
Southwestern Michigan Jovian League Benton Harbor, Michigan	" No.	21
Watertown (Wis.) Jovian League	" No.	22
Akron (Ohio) Jovian League	" No.	23
Wilmington (Del.) Jovian League	" No.	24
Dallas Jovian League	" No.	25
Columbus Jovian League	" No.	26
Denver Jovian League	" No.	27
New York Jovian League	" No.	28
New Orleans Jovian League	" No.	29
Houston Jovian League	" No.	30
Atlantic City Jovian League	" No.	31
Globe Jovian League	" No.	32
Trenton Jovian League	" No.	33

JOVIAN HOTELS

HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their **current membership cards** at the time of settlement. **Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage.** Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

	Minimum Without Bath	Minimum With Bath
Asheville, N. C.—Langren	.....	.....
Baltimore, Md.—Emerson	$2.00	$2.50
Boise, Ida.—Idanha	$1.00	$1.50
Boston, Mass.—Brunswick	.....	.....
Charlotte, N. C.—Buford	$1.00	$1.50
Chattanooga, Tenn.—Theresa	.....	.....
Colorado Springs, Colo.—Acacia	.....	.....
Columbia, S. C.—Colonial	.....	.....
Dallas, Tex.—Oriental	$1.50	.....
Des Moines, Ia.—Kirkwood	.....	.....
Denver, Colo.—Albany	$1.00	$1.50
Detroit, Mich.—Hotel Tuller	.....	.....
Dixon, Ill.—Dixon Inn	$1.00	.....
Edmonton, Alta.—Alberta	.....	.....
Eau Claire, Wis.—Eau Claire	.....	.....
Ft. Wayne, Ind.—Wayne	$1.00	.....
Ft. Worth, Tex.—Metropolitan	.....	.....
Gary, Ind.—Gary	$1.00	$1.50
Grand Rapids, Mich.—Livingston	$1.00	.....
Harrisburg, Pa.—Columbus	.....	.....
Houston, Tex.—Bender	$1.50	$2.00
Hutchinson, Kan.—Chalmers	.....	.....
Idaho Falls, Ida.—Eleanore	$1.00	$2.00
Jackson, Miss.—Royal	.....	.....
Jacksonville, Fla.—Mason	.....	.....
Jacksonville, Ill.—Pacific	.....	.....
Kalispell, Mont.—Kalispell	$1.00	.....
Kansas City, Mo.—Coates	$1.00	$1.50
Lethbridge, Alta.—Alexandria	$1.00	.....
Los Angeles, Cal.—Clark, New Rosylyn	$1.00	$1.50
Louisville, Ky.—Galt	.....	.....
Madison, Wis.—Capital	$1.00	.....
Milwaukee, Wis.—Charlotte	$1.00	.....
Mitchell, S. D.—New Navin	.....	.....
Montgomery, Ala.—Exchange	.....	.....
Montreal, P. Q.—St. Lawrence Hall, Windsor	.....	.....
Muskegon, Mich.—Muskegon	$1.00	$1.50
New Orleans, La.—De Soto	$1.00	.....
New York, N. Y.—Breslin	.....	.....
Niagara Falls, N. Y.—Prospect	.....	.....
Norfolk, Va.—Southland	$1.00	$1.50
Oshkosh, Wis.—Tremont	.....	.....
Peoria, Ill.—Mecca	$1.00	.....
Philadelphia, Pa.—New Bingham	$1.50	$2.50
Pittsfield, Mass.—Wendell	$1.50	.....
Portland, Ore.—Multnomah, Oregon	$1.50	.....
	$1.00	$2.00
Richmond, Va.—Jefferson, Richmond	$1.50	$2.50
	$1.50	$2.50
Roanoke, Va.—Rockledge	$1.00	.....
Rochester, N. Y.—Powers	.....	$2.00
Rutland, Vt.—Berwick	.....	.....
St. Joseph, Mo.—St. Francis	.....	.....
St. Louis, Mo.—American	$1.50	.....
Salt Lake City, Utah—Newhouse	.....	.....
San Angelo, Tex.—Landon	.....	.....
San Diego, Cal.—San Diego	$1.00	.....
San Francisco, Cal.—Argonaut, Sutter	$1.00	$2.00
	$1.50	.....
Santa Barbara, Cal.—Potter	.....	.....
Schenectady, N. Y.—Mohawk	$1.00	$2.00
Seattle, Wash.—Seattle	$1.00	$2.00
Sheridan, Wyo.—Sheridan	.....	.....
Shreveport, La.—Youree	.....	.....
Sioux City, Ia.—Martin	$1.00	$2.00
Spokane, Wash.—Spokane	.....	.....
Springfield, Mo.—Colonial	.....	.....
Tacoma, Wash.—Olympus	.....	.....
Three Rivers, Mich.—Three Rivers	$2.00	.....
Tucson, Ariz.—Heidel	.....	.....
Vicksburg, Miss.—Carroll	$1.00	.....
Waco, Tex.—New State	$1.00	$2.00
Watertown, S. D.—Kampeska	$1.00	.....
Watertown, Wis.—New Commercial	$1.00	$1.50
Winnipeg, Man.—St. Regis	$1.50	.....
Winona, Minn.—Winona	.....	.....

LIST OF STENTORS

CHIEF STENTORS

FOURTH DISTRICT
ROBERT L. CUNNINGHAM, Po. 4749,
Care J. F. Buchanan & Company, Philadelphia

FIFTH DISTRICT
E. F. MEYERS, Po. 6170,
345 Federal Park Place, Fort Wayne, Indiana

THIRTEENTH DISTRICT
RICHARD F. BEHAN, Po. 9315,
Care Westinghouse Electric & Manufacturing Co., San Francisco, Cal.

SIXTH DISTRICT
GEORGE E. WATTS, Po. 12482
Care Electric Service Supplies Co., Atlanta, Ga.

ATTENTION MANUFACTURERS

Experienced Electrical district sales manager and traveling representative is open for position with progressive manufacturing concern.

Thirty-five years old, twelve years experience selling jobbers and doing missionary work with dealers and architects. Has wide acquaintance in Central and Southern states. At present employed but desires change for good reasons. Address A1, care The Jovian, 1415 Syndicate Trust Building, St. Louis, Mo.

WATER DAMAGE TO FLOUR

It is a well-known fact among sailors that flour will not only float after immersion in sea water, but suffers very little damage. To ascertain the actual damage, says the Northwestern Miller, a baker in New South Wales submerged a bag of flour in the ocean and left it in the water sixty-seven hours. A 98-pound weight was necessary to sink a 150-pound bag, which would have supported seventy-five pounds on top of the water, it is estimated, or half its own weight. When lifted and weighed, the bag scaled one hundred and fifty-five pounds. It was dried for four days and yielded one hundred and twenty pounds of perfectly dry flour, the bag and waste weighing twenty-eight pounds. Baked into bread, it gave perfect results.

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STATESMEN-AT-LARGE

BISCHOFF, W. E., Po. 3190, care W. N. Matthews & Bro.....Chicago, Ill.
CARPENTER, JOHN, Po. 1320, care Corsicana Gas & Electric Co.....Corsicana, Tex.
CHASE, SAMUEL A., Po. 4424, care Westinghouse Electric & Manufacturing Co.....East Pittsburgh, Pa.
CRONINGER, C. R., Po. 9624-60V, care General Electric Co.....St. Louis, Mo.
DALY, DAVID, Po. 366-V, care Houston Electric Co.....Houston, Tex.
DOWNS, B. M., Po. 2508, care Hemingray Glass Co.....Covington, Ky.
ELKAS, I., Po. 9931, care Robbins & Myers.....St Louis, Mo.
GUARDIA, A. A., Po. 2657, 4447 Magnolia Ave.....Chicago, Ill.
HAND, WILLIAM, Po. 796, care General Electric Co.....Kansas City, Mo.
HAWKINES, R. V., Po. 11619, care Appleton Electric Company.....St. Louis, Mo.
HEAD, W. B., Po. 139-108, care Texas Power & Light Co.....Dallas, Tex.
HERSTEIN, W. R., Po. 765V, care Electric Supply Co.....Memphis, Tenn.
HICKOX, NORMAN B., Po. 7881, care National X-Ray Reflector Co., 235 West Jackson Blvd.....Chicago, Ill.
HILL, G. W., Po. 1271, 29 West Thirty-Ninth St.....New York, N. Y.
HOLCOMBE, W. P., Po. 901V, care Builders Exchange.....Minneapolis, Minn.
JENNINGS, O. A., Po. 226, care Southwest General Electric Co.....Dallas, Tex.
LAUDERBACH, F. E., Po. 11655, 917 Pine St.....St. Louis, Mo.
LEWIS, P. LLOYD, Po. 6018V, care Wagoner Electric Company....Kansas City, Mo.
MARTIN, CHARLES L., Po. 176-56V, care Electric Specialty Co.....Dallas, Tex.
RAMIER, J. F., Po. 10604, care Memphis Cons. Gas & Electric Co..Memphis, Tenn.
SERVA, A. A., Po. 425, 2420 Hoagland Ave.....Ft. Wayne, Ind.
TUTTLE W. B., Po. 1031, care San Antonio Traction Co.....San Antonio, Tex.
VOGAN, W. G., Po. 15974, care Northern Electric Co.....Winnipeg, Man.
VOGEL, J. C., Po. 2254-32V, Fifty-Ninth and Woodland Ave.....Philadelphia, Pa.
WADDINGTON, E. H., Po. 5176, care Western Electric Co.....St. Louis, Mo.
WAKEMAN, J. M., Po. 524, 29 West Thirth-Ninth St.....New York, N. Y.

JOVIAN STATESMEN

ALABAMA
MATTHEWS, H. W., Po. 4476, care Burgoon-Matthews Electric Co.....Birmingham

ARIZONA, CALIFORNIA, NEVADA
SPERRY, LEWIS E., Po. 9415, care New York Insulated Wire Co.....San Francisco

ARKANSAS
GRIFFITH, C. J., Po. 13901, care Little Rock Railway & Electric Co...Little Rock

CONNECTICUT
HOLMES, T. L., Po. 3046, care Western Electric Co.....West Haven

GEORGIA
COLLIER, RAWSON, Po. 4458, care Georgia Railway & Power Co.....Atlanta

IDAHO
KIERSTED, EARNEST C., Po. 10258, care Idaho Power Co.....Twin Falls

ILLINOIS
SPAKE, L. C., Po. 15397V, care Western Editor McGraw-Hill Publishing Co..Chicago

INDIANA
LEE, WALLACE O., Po. 11440, care Indianapolis Light, Heat & Power Co.Indianapolis

KENTUCKY
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville

LOUISIANA
PORTEOUS, W. A., Po. 9226, care Western Union Telegraph Co.....New Orleans

MASSACHUSETTS
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston

MICHIGAN
CAVANAUGH, J. A., Po. 11199, care Benton Harbor & St. Joe Ry. Co..Benton Harbor

MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA
VILETT, W. H., Po. 3675V, care Sterling Electric Co.....Minneapolis

MISSOURI
JOHNSON, FRED, Po. 177V, care Wagner Electric Manufacturing Co...St. Louis

NEBRASKA
ZIMMAN, I. B., Po. 1411, care Omaha Electric Light & Power Co.....Omaha

NEW HAMPSHIRE
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston Mass.

NEW JERSEY, DELAWARE
HOWLETT, C. A. S., Po. 279.....Elisabeth

NEW MEXICO
SHEPARD, J. A., Po. 16106, care Deming Ice & Electric Co.....Deming

NEW YORK
HINES, E. G., Po. 16222, care Electrical World, 239 West Thirty-Ninth St.New York

OHIO
P. B. ZIMMERMAN, Po. 7305V, care National Electric Lamp Association, Nela Park.....Cleveland

OKLAHOMA
MCCALLUM, CHARLES, Po. 3394, care Western Electric Co.....Oklahoma City

PENNSYLVANIA
CRISS, GEO. H., Po. 3364.....Pittsburgh

RHODE ISLAND
DAVENPORT, E. R., Po. 8019, care Naragansett Electric Light Co.....Providence

SOUTH CAROLINA
FULLER, W. W., Po. 16462, care Isle of Palms Traction Co.....Charleston

TENNESSEE
WATSON, C. J. R., Po. 2131V, care Electric Supply Co.....Memphis

TEXAS
CLARK, HIRAM O., Po. 6629, care Houston Lighting & Power Co.....Houston

UTAH
TALMADGE, CHARLES H., Po. 1431, care Western Electric Co.....Salt Lake City

VERMONT
LARRABEE, E. E., Po. 1145, care Twin States Gas & Electric Co.....Bennington

VIRGINIA
SEILER, GUY E., Po. 7479, care Virginia Railway & Power Co.....Richmond

WEST VIRGINIA
POWERS, W. R., Po. 2784, care Consolidated Heat, Light & Power Co...Huntington

WISCONSIN
GOLIN, CARL, Po. 12385V, care Northwestern Storage Battery Co.....Milwaukee

PROVINCE OF ALBERTA
RICHARDS, NORMAN S., Po. 8985, care Northern Electric Co.....Calgary

PROVINCE OF MANITOBA
SCHUMACHER, J. H., Po. 1742, care Schumacher-Gray Co., Ltd.....Winnipeg

PROVINCE OF QUEBEC
HYDE, E. N., Po. 1614, care Northern Electric & Manufacturing Co...Montreal

FIRST AND SECOND TRIBUNES

ALABAMA
MATTHEWS, H. W., Po. 4476, First Tribune, care Burgoon-Matthews Electric Co.....Birmingham

ARIZONA
*HOWLAND, JOHN, Po. 18686, First Tribune, care Globe Light & Power Co....Globe

ARKANSAS
RUSH, J. C., Po. 1556V, First Tribune, care Rush Bros.....Hot Springs
(*Nicholas Lund, Po. 17257, Second Tribune)

CALIFORNIA
*FAGG, J. H., Po. 12212, First Tribune, care Pacific Gas & Electric Co....Stockton
(*A. F. Flanagan, Po. 12213, Second Tribune.)
GOULD, T. A., Po. 18057, First Tribune, care Redondo Home Telephone Co.....Redondo Beach
*LANDIS, H. G., Po. 288, First Tribune, care Landis Electric Co., 941 8th St., San Diego
(*H. B. Steventon, Po. 14643, Second Tribune)
(R. C. Cavell, Po. 14627, Second Tribune)
(Henry Mellman, Po. 9392, Second Tribune).....Oakland
*NIGHTINGALE, E. L., Po. 18072, First Tribune, care General Electric Co., 724 Spring St.....Los Angeles
(·F. J. Airey, Po. 1266, Second Tribune)
*ROWE, A. E., Po. 995, First Tribune, care Telephone Electric Co.....San Francisco
*(Edwin R. Brown, Po. 7715, Second Tribune)
*TOBEY, J. O., Po. 12226, First Tribune, care Pacific Gas & Electric Co.....Sacramento
*(H. F. Schultz, Po. 14914, Second Tribune)

COLORADO
*BURNITE, T. B., Po. 3426V, First Tribune, Boston Bldg.....Denver
(*H. S. Sands, Po. 1708, Second Tribune)
PAUL, CLARENCE M., Po. 4942, First Tribune, care Trinidad Gas & Electric Supply Co.....Trinidad

CONNECTICUT
*LOUWIEN, H. A., Po. 19696, First Tribune, care Danbury & Bethel Gas & E. I. Co.....Danbury

DELAWARE
*SHELTON, H. E., Po. 14400, First Tribune, care Wilmington & Philadelphia Traction Co.....Wilmington

DISTRICT OF COLUMBIA.
*CARROLL, H. R., Po. 1794, First Tribune, 714 Twelfth St..... .. ..Washington

GEORGIA
(Geo. E. Watts, Po. 12482, Second Tribune).....Atlanta

IDAHO
DOVERY, C. G., Po. 10241, First Tribune, care Idaho Power Co.....Twin Falls
(J. O. Blackstone, Po. 15318, Second Tribune)

ILLINOIS
BAUM, B. E., Po. 19260, First Tribune, care Vermillion County Telephone Co.....Danville
BROWN, EDWIN C., Po. 5278, First Tribune, care Galva Electric Light Co...Galva
(Chas. E. Broderick, Po. 1154, Second Tribune).....East St. Louis
GREEN, WM. A., Po. 13279, care Green Electric Co., 315 South Jefferson St...Peoria
(Jas. R. Downs, Po. 13277, Second Tribune)
KETTRON, C. W., Po. 16416, First Tribune, President, Illinois Elect. Porc. Co.....Macomb
(James R. Massey, Po. 8939, Second Tribune).....Springfield
MORSE, CHESTER A., Po. 14611, First Tribune, care Central Public Illinois Service Co.....Mattoon
(Donald R. Truax, Po. 14617, Second Tribune)
*NELSON, A. L., Po. 15384, First Tribune, care Commonwealth Edison Co..Chicago
(*W. H. Colman, Po. 3040V, Second Tribune.)

INDIANA
HARRIS, A. B., Po. 14154, First Tribune, 570 Washington St.....Gary
*LOUTH, M. E., Po. 16419, First Tribune, care Globe Stove & Range Co...Kokomo
*VICTOR, H. R., Po. 4857, First Tribune, care Varney Electrical Supply Co., 235 South Meridian St.....Indianapolis

IOWA
*ABELL, C. S., Po. 3952V, First Tribune, 419 Main St.....Keokuk
FLACK, FRANK W., Po. 13979, First Tribune, care Iowa Ry. & Light Co..Coon Rapids
MCINNERNEY, B., Po. 1400, First Tribune, care Kimball Bros. & Co..Council Bluffs
(E. S. Damon, Po. 1398, Second Tribune)
MURPHY, J. E., Po. 15800, First Tribune, care Murphy-Dunham Co..Sioux City

KANSAS
*CARR, J. E., Po. 16506, First Tribune, 446 S. 7th St.....Salina
*(M. L. Derge, Po. 9616, Second Tribune)
HUBBARD, HARVEY B., Po. 17623, First Tribune, care Hubbard Electric Co..Beloit
*MAGRUDER, H. W., Po. 15816, First Tribune, care Liberal Light, Ice & Power Co.....Liberal
*WADSWORTH, W. A., Po. 7249, First Tribune, care Kansas Gas & Electric Company.....Wichita
*WRIGHT, E. A., Po. 15827, First Tribune, care Great Bend Water & Electric Co.....Great Bend

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KENTUCKY

ADAMS, F. C., Po. 18315, First Tribune, proprietor, Adams Electric Co...Sulphur
BERRY, D. EARLE, Po. 8245, First Tribune, care Ruby House .....Owensboro
(C. C. Childers, Po. 15494, Second Tribune).....Louisville

LOUISIANA

JOUBERT, W. C., Po. 16467, First Tribune, 409 Main St.....Baton Rouge
*LEVY, FERDINAND, Po. 6696, First Tribune, care Interstate Electric Co., New Orleans
(*T. N. Lide, Po. 3925, Second Tribune)
MCCONNELL, JOHN J., Po. 17031, First Tribune, care Rayville Light Plant..Rayville
*SWANN, L. A., Po. 2730-100, First Tribune, care Lake Charles Railway & Light Company.....Lake Charlee
(*J. A. Landry, Po. 127, Second Tribune.)
WILLIAMS, J. A., Po. 5053, First Tribune, care Southwest Gas & Electric Co.....Shreveport
(H. E. Cahn, Po. 13025, Second Tribune)

MARYLAND

(Stanley B. Prather, Po. 1650, Second Tribune).....Baltimore

MASSACHUSETTS

(Kurt R. Sternberg, Po. 7612, Second Tribune).....Springfield

MICHIGAN

*AVIS, C. J., Po. 10086, First Tribune, care Southern Michigan Light & Power Co.....Morenci
*BURCHARD, C. A., Po. 19049, First Tribune, care B. H. & St. Joe Ry. & Light Co.....Benton Harbor
(*Earl Frakes, Po. 15528, Second Tribune)
*CUDAHY, J. D., Po. 16321, First Tribune, care Consumers Power Co....Kalamazoo
(*L. W. Brown, Po. 16319, Second Tribune.)
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St.....Traverse City
MCCLOY, A. S., Po. 11051, First Tribune, care Stevenson Hotel.....Detroit
(J. T. Pearson, Po. 11210, Second Tribune)
*MARBLE, CHARLES M., Po. 13961, First Tribune, 67 College St.....Battle Creek
(*L. R. Greusel, Po. 10918, Second Tribune)
SCHAGANE, P. F., Po. 13871, First Tribune, 617 South Saginaw St.....Flint
(L. G. Copeman, Po. 7219, Second Tribune)
*THORNE, JOHN J., Po. 14749, First Tribune, care Throne Electric Co.....Bay City
(*Samuel Ball, Po. 19542, Second Tribune.)
*TROMBLEY, GEORGE, Po. 14750, First Tribune, care Trombley Electric Co., 130 N. Jefferson St.....Saginaw
(*A. B. Brow, Po. 14737, Second Tribune, 228 South Weadock Ave).....Saginaw
WATSON, GEO. H., Po. 12848, First Tribune, care Consumers Power Co., 124 Monroe St.....Grand Rapids
(R. H. Vandermass, Po. 16484, Second Tribune)

MINNESOTA

*ANDERSON, EMIL, Po. 7805, First Tribune, 239 Plymouth Building....Minneapolis
(*Paul Joyslin, Po. 1254, Second Tribune.)
*GRIMES, W. A., Po. 761, First Tribune, care Northern Electric Co.....Duluth
(*F. A. Johnson, Po. 8192, Second Tribune)

MISSISSIPPI

*BRANDLI, H. E., Po. 15617, First Tribune, care Meridian Light & Power Co.Meridian
(*Chas. M. Rogers, Po. 14485, Second Tribune)
GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co.....Gulfport
*MCANGE, W. N., Po. 16854, First Tribune, care Southern Telephone & Telegraph Co., Telephone Building.....Corinth
NEWBILL, HOMER J., Po. 16855, First Tribune, Box 413.....Tupelo

MISSOURI

*BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co.....Marshall
(G. E. Michel, Po. 9061, Second Tribune).....St. Louis
FOX, CHAS. D., Po. 18163V, First Tribune, care City Light Plant.....St. Joseph
(S. W. Beale, Po. 6840, Second Tribune)
(*A. D. Barber, Po. 1850, Second Tribune.)
(A. M. Grall, Po. 4112, Second Tribune).....Joplin
*NIENHAUS, J. V., Po. 19219, First Tribune, care Perry County Public Utilities Co.....Perryville
*WALKER, A. H., Po. 17669, First Tribune, care Walker-O'Byrne Electric Co.....Springfield

NEBRASKA

BURLEY, W. B., Po. 10291, First Tribune, 318½ West Koenig St.....Grand Island
(J. D. Whitmore, Po. 1409, Second Tribune)

NEW JERSEY

ALEXANDER. JOHN P., Po. 11892, First Tribune, Broad St. Bank Bldg....Trenton
COX, W. A., Po. 18960, First Tribune, care Public Service Electric Co...Newark
FEY, W. E., Po. 10120, First Tribune, care Diehl Manufacturing Co..Elizabeth
*PURINTON, A. J., Po. 9643V, First Tribune, care Atlantic City & Shore Ry. Co.....Atlantic City
(*Wm. Bach, Po. 14191, Second Tribune)
STORTZ, H. W., Po. 16450, First Tribune, care Edison Storage Battery Co..Orange
(J. B. Renwick, Po. 16445, Second Tribune)

NEW MEXICO

*HICKS, A. C., Po. 17978, First Tribune, care Albuquerque Gas & Electric Co.....Albuquerque
*ROBERTS, E. A., Po. 17980, First Tribune, care Public Utilities Co.....Carlsbad
SMITH, JAMES R., Po. 16107, First Tribune, care Raton Electric Light & Power Co.....Raton

NEW YORK

C. C. MacKenzie, Po. 2029, Second Tribune).....Syracuse
BURNS, JOHN H., Po. 870, First Tribune, care McCarthy Bros. & Ford, 41 Eagle St.....Buffalo
(L. F. Philo, Po. 774, Second Tribune)
*PELS, GEO. V. W., Po. 18674, First Tribune, care New York Telephone Co., 109 West 125th St.....New York
*(W. J. Moore, Po. 3136, Second Tribune).....New York
*RUSSELL, R. E., Po. 5561, First Tribune, care General Electric Co....Schenectady

NORTH CAROLINA

JONES, WM. T., Po. 5685, First Tribune, P. O. Box 405.....Fayetteville
SPEAKE, CHAS. L., Po. 16993, First Tribune, care Westinghouse Electric & Manufacturing Co.....Charlotte
*SPENCER, G. L., Po. 11366, First Tribune, 713 Chestnut St.....Greensboro
(*R. H. Milton, Po. 11371, Second Tribune)

OHIO

*ALLIS, CLARENCE L., Po. 13203, First Tribune, care Wooster Electric Company.....Wooster
BRAUN, W. A., Po. 14652, First Tribune, care Braun Electric Manufacturing Co.....Dover
*BULKELEY, W. V. C., Po. 17998, First Tribune, care Columbus Railway, Power & Light Co.....Columbus
*COCHRAN, J. E., Po. 15898, First Tribune, care Ohio Electric Co.....Lima
*COONEY, JAS. J., Po. 13184, First Tribune, care Toledo Railway & Light Co.Toledo
(*Alonzo W. Roush, Po. 12410, Second Tribune)
CRAIN, CHARLES E., Po. 6946, First Tribune, care Crain-Stuart Co.....Springfield
(Fred J. Green, Po. 6951, Second Tribune)
*DUNNING, R. S., Po. 16471, First Tribune, care Forest City Rubber Co., Cleveland
*FENTON, E. BURT, Po. 18446, First Tribune, care Northern Ohio Traction & Light Co.....Akron
(F. B. Steele, Po. 13451, Second Tribune)
*FOX, HORACE C., Po. 16361, First Tribune, care Massillon Gas & Electric Company.....Massillon
HENCH, L. W., Po. 7854, First Tribune, care Westinghouse Electric & Manufacturing Co.....Youngstown
(E. A. Sanders, Po. 9666, Second Tribune)
HURD, WILLIAM P., Po. 9798, First Tribune, care Northwestern Ohio Light Company.....Van Wert
(*Samuel E. Ringgold, Po. 10995, Second Tribune.)
LOEWE, P. M., Po. 3942, First Tribune, care Oberlin Gas & Electric Co..Oberlin
MILLER, E. G., Po. 13108, First Tribune, care Warren & Niles Telephone Co..Warren
(Marshall, W. J., Po. 10001, Second Tribune.)
PARKER, HERBERT L., Po. 905, First Tribune, care Conneaut Metal Works Co.....Conneaut
*ROHRBAUGH, C. L., Po. 18450, First Tribune, 1211 Carr St.....Sandusky
(*R. C. Beebe, Po. 18442, Second Tribune.)
(J. D. Witner, Po. 14412, Second Tribune)
SIMS, E. A., Po. 5968V, First Tribune, care Avery-Loeb Electric Co.....Newark
(F. C. Morrison, Po. 18630, Second Tribune)
SMITH, E. B., Po. 10596, First Tribune, care Coshocton Gas Co.....Coshocton
*SNYDER, ED., Po. 19753, First Tribune, care Ohio Brass Company.....Mansfield
(*H. S. Robeson, Po. 13200, Second Tribune).
*VAN WINKLE, FRANK D., Po. 12966, First Tribune, care Post Glover Co..Cincinnati
(*L. E. Trotter, Po. 3510, Second Tribune.)

OKLAHOMA

*CORKEN, O. K., Po. 19827, First Tribune, 213 W. First St.....Oklahoma City
(*A. L. Mullengren, Po. 18853, Second Tribune.)
HOWELL, EDWARD, Po. 7896, First Tribune, care Abernathy & Howell, Elks Building.....Shawnee
*RENTCHLER, C. E., Po. 6870, First Tribune, care Enid Electric & Gas Company.Enid
(*Lincoln Beerbower, Po. 1475, Second Tribune.)
*STRASSWEG, FRED A., Po. 19821, First Tribune, care Muskogee Gas & Electric Co.....Muskogee
(*Edgar M. Graham, Po. 19811, Second Tribune)
*WALKER, P. G., Po. 6871, First Tribune, care Tulsa Corporation.....Tulsa
(James M. Kinslow, Po. 16770, Second Tribune.)

PENNSYLVANIA

*FADER, W. L., Po. 2883, First Tribune, care Union Electric Co.....Pittsburgh
(*D. Paul Lockard, Po. 5788, Second Tribune.)
FERREE, L. L., Po. 18865, First Tribune, 1830 Regina St.....Harrisburg
KRISE, W. M., Po. 4823, First Tribune, Manager, Jefferson Electric Co. Punxsutawney
LODGE, JOS., Po. 18869, First Tribune, 157 East Chestnut St.....Lancaster
MURPHY, WALTER R., Po. 14021, First Tribune, care Meadville Telephone Co.....Meadville
(Carl W. Wilks, Po. 10848, Second Tribune)
(W. T. Snyder, Po. 5128, Second Tribune).....McKeesport
REGER, THOMAS E., Po. 4637, First Tribune, 224 Seventh Ave.....Altoona
*ROUNDS, L. B., Po. 14528, First Tribune, care New Castle Electric Co., 19 Washington St.....New Castle
(*J. C. Chestnut, Po. 14873, Second Tribune)

SOUTH CAROLINA

DOUGLAS, JAS. A., Po. 16984, First Tribune, care Municipal Electric Plant Lake City
(T. A. Brookbanks, Po. 16460, Second Tribune).....Charleston

TENNESSEE

ALLEN, TERRY E., Po., 18838, First Tribune P. O. Box 185.....Jackson
*JONES, GRAYSON, Po. 13782, First Tribune, care Electric Equipment Co., 131 Eighth Ave., North.....Nashville
RUTLEDGE, C. B., Po 2127, First Tribune, care Bluff City Electric Co...Memphis
(B. F. Myers, Po. 12911, Second Tribune)

TEXAS

*IRVINE, R. J., Po. 6251, First Tribune, care San Angelo Water Light & Power Co.....San Angelo
*COOPER, H. S., Po. 365, First Tribune, care Southwest Gas & Electric Co., 405 Slaughter Building.....Dallas
COPLEY, E. F., Po. 7073, First Tribune, care Central Electric Co.....Waco
(L. B. Gardner, Po. 11390, Second Tribune)
*FROST, F. G., Po. 4015V, First Tribune, care Houston Lt. & Pr. Co.....Houston
*KELSEY, L. M., Po. 11350, First Tribune, care S. W. Tel. & Tel. Co....Galveston
(*WOOTEN, J. H., Po. 20357, Second Tribune)
LARABEE, R. W., Po. 1327, First Tribune, care Southwestern Electric & Machine Co.....El Paso
*MILLER, THOS. L., Po. 8766, First Tribune, 219 Poplar St.....Abilene
MONTGOMERY, JOHN G., Po. 11355, First Tribune.....La Marque
MUNROE, WALTER N., Po. 3085, First Tribune, care Texas Power & Light Co.....Paris
REID, BRUCE, Po. 18290, First Tribune, care Gulf Refining Co.....Port Arthur
(Edward T. Keck, Po. 18284, Second Tribune)
*SCOVILL, F. E., Po. 17, First Tribune, care San Antonio Builders Exch..San Antonio
(*C. G. Matthews, Po. 10662, Second Tribune)

SMITH, GEO. B., Po. 6649, First Tribune, 309 Guadalupe St.....San Marcos — Central Texas League — Lockhart, Luling, Seguin, New Braunfels, San Marcos

VIRGINIA

*LANCASTER, WM., Po. 6594, First Tribune, care Western Electric Co.....Richmond
(Peter Winston, Po. 1546, Second Tribune)
*MACLEARY, H. M., Po. 9725, First Tribune, 707 Washington St.....Suffolk
(*J. E. B. Holliday, Po. 17106, Second Tribune)
*PATRICK, W. A., Po. 19859, First Tribune, care Dupont-DeNemours & Co. Hopewell
(*G. C. Hurst, Po. 8931, Second Tribune)
WOODHOUSE, H. C., Po. 6618, First Tribune, 54 Bank St.....Norfolk

WASHINGTON

(H. B. Pierce, Po. 7235, Second Tribune).....Spokane

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WEST VIRGINIA

COSTINE, THOS. E., Po. 7699, First Tribune, 1059 McColloch St.....Wheeling
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*SCHEURMANN, A. R., Po. 17653, First Tribune, 8 Main St.....Watertown
(*Walter O. Wickler, Po. 20000, Second Tribune)

CANADA

ALBERTA

(David Conn, Po. 11885, Second Tribune).....Lethbridge

MANITOBA

*HENRY, J. S., Po. 5994, First Tribune, 152 Gary St.....Winnipeg
(*G. J. Brown, Po. 5977, Second Tribune)

ONTARIO

*BRADLEY, J. M., Po. 13203, First Tribune.....Iroquois Falls
(C. B. Deeks, Po. 17101, Second Tribune).....Coniston
*COOKE, W. P., Po. 16714, First Tribune, P. O. Box 178.....Port Arthur

SASKATCHEWAN

SANGSTER, A. G., Po. 7496, First Tribune, 820 Fourteenth St., East...Saskatoon

SPAIN

EDDY, H. W., Po. 11105, First Tribune, care Riegos y Fuerza del Ebro S. A.
Apartado 491.....Barcelona

* * * *

JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, V. W. Shear, Po. 14399, 609 Flatiron Building.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, R. J. Hadlow, Po. 15530, care Electric Service Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, Edmond D. McCarthy, Po. 589-10, 41 East Eagle Street.

CHATTANOOGA—Wednesday, 12:00 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge, 1900 Continental & Commercial Bank Building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, Joseph C. Bowman, Po. 6275, care H. W. Johns-Manville Company.

CLEVELAND—Regular meeting, Thursday, 12:00 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12:00 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Railway, Power & Light Company.

DALLAS—First and third Mondays, Hotel Adolphus, 12:15 p. m. Secretary, E. E. Roessler, Po. 12128, P. O. Box 1506.

DAYTON—First and third Mondays of each month, 12:00 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Company.

DENVER—Wednesday, 12:15 p. m., Kaiserdorf Hotel. Secretary, R. Arnold Lewis, Po. 11514, care Edins Lamp Works.

DETROIT—Meetings Saturday, 12:30 p. m., Grill Room, Board of Trade. Secretary, R. J. Kirchner, Po. 5199, care General Electric Company.

EAU CLAIRE—First Monday each month. Secretary, E. C. Dearth, Po. 17144V, care Wis. & Minn. Light & Power Co.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna Street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur Hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Company.

GALVESTON—Meet on call. Secretary, F. G. Cassan, Po. 20343, 521 22nd St.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Company.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Company.

HOUSTON (TEX.) Date later. Rice Hotel, Sec'ry R. S. Daunoy Po. 20073, care Houston Lighting & Power Co.

INDIANAPOLIS—Monday, 12:15 p. m. Secretary, A. H. Smith, Po. 13580, care Ford Motor Car Company, 1315 East Washington Street.

KANSAS CITY—Third Friday each month, 12:15 p. m., Hotel Muehlebach. Secretary, T. R. Harber, Po. 18908, 1500 Grand Avenue.

LA CROSSE—First Thursday each month, Elks Club, 6:00 p. m. Secretary, Dan J. Whalen, Po. 16022, care Thill-Manning-Whalen Company.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Company.

LOS ANGELES—Wednesday, 12:00 m., Jahnke's Tavern, 534 South Spring Street. Secretary, Clifton Peters, Po. 12734, 108 Edison Building.

LOUISVILLE—Tuesday, 12:15 p. m., Hotel Henry Watterson. S. B. Storm, Po. 9781, care General Electric Company.

MANSFIELD—Date and place of meeting from Secretary, H. A. Waite, Po. 16625, care Federal Sign System.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel. Secretary, W. R. Murphy, Po. 14021, care Meadville Telephone Company.

MILWAUKEE—Second Tuesday each month, Hotel Plankington. Secretary, F. V. Ziekursch, Po. 16625, 436 Public Service Building.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second Avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

MUSKOGEE—Secretary, A. E. Farmer, Po. 19809, 544 N. 11th St.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Company.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne Street, New Orleans, La.

NEW YORK—Place and date of meeting from Secretary, F. M. Feiker, Po. 17197, care Electrical World, Tenth Avenue and Thirty-sixth Street.

OKLAHOMA CITY—Monday, 12:15 p. m., Lee Huckins Hotel. Secretary, A. L. Mullergren, Po. 18853, care Berham Engineering Company.

PEORIA—First and third Saturdays of each month, 1:00 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Company.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon Street.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, R. Gray Jones, Po. 16094, care Cutter-Hammer Co.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's Restaurant, Kellog Street. Secretary, J. O. Roser, Po. 10412, care General Electric Company.

RICHMOND—Third Wednesday of each month, Business Men's Club. Secretary, L. E. Walker, Po. 6610, care Western Electric Company.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Company.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto Avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Company.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Ridpath, Po. 7739, 505 Rialto Building.

SPOKANE—First and third Wednesdays of each month, 12:00 m., Davenport's Hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Company.

STARK COUNTY—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

ST. LOUIS—Tuesday, 12:15 p. m., American Annex Hotel. Secretary, Geo. McD. Johns, Po. 9052, Room 401, City Hall.

ST. JOSEPH, MO.—Secretary, W. R. Thomas, Po. 1489, care American Electric Company.

TULSA, OKLA.—Monday, 12:00 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G. Walker, Po. 6871, 18 West Third Street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Company.

WATERTOWN, WIS.—7:00 p. m., last Thursday each month, New Commercial Hotel. Secretary, H. J. Hippler, Po. 20007, care Wis. Gas & Electric Co.

WICHITA—First and third Mondays of each month, 12:00 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Company.

WINNIPEG—Every other Thursday, 12:15 p. m., Fort Garry Hotel. Secretary, C. T. Kummen, Po. 15957, 386 Donald Street.

* * * *

GERMAN KULTUR NOT A NEW THING

"EVERY village they have passed through has been the victim of what is only organized pillage. Every city has been practically sacked, ransacked on system; its citizens plundered, its civil officials terrorized, imprisoned, outraged or killed. The civil populations have been, contrary to the usage of modern warfare, forced to serve the invading armies, brutally put to death, reduced to wholesale starvation, and desolation. Vast tracts of the richest and most industrious districts of Europe have been deliberately stripped and plunged into famine, solely in order that the invaders might make war cheaply. Irregular troops, contrary to all the practice of war, have been systematically murdered, and civil populations indiscriminately massacred, solely to spread terror. A regular system of ingenious terrorism has been directed against civilians, as horrible as anything in the history of civil or religious wars. Large and populous cities have been, not once, but twenty, thirty, forty times, bombarded and burnt, and the women and children in them wantonly slaughtered, with the sole object of inflicting suffering. All this has been done not in license or passion, but by the calculating ferocity of scientific soldiers."

The above was not written, though it might have been, yesterday, last week, last month, or last year. It appeared in the English Fortnightly Review, February, 1871, shortly before the surrender of Paris. Frederick Harrison, the writer, is still alive. Its statements were true then, are true now. Julius Caesar in his Commentaries narrates events which show that even before the time of Christ the Germans demonstrated the possession of all the rudiments of their modern "kultur." It is no new thing; and hundreds of thousands of men will have died in vain in this war if this sinister thing is not absolutely and utterly exterminated forever by the forces of civilization arrayed against it.

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THE JOVIAN

Volume Twelve MAY, 1918 Number Six

SPEECH OF EDWARD N. HURLEY AT TESTIMONIAL DINNER TO ISAAC F. MARCOSSON AT THE WALDORF, NEW YORK CITY, APRIL 24, 1918.

IT IS a pleasure to participate in a testimonial dinner to Mr. Isaac F. Marcosson as one of the journalists who are writing constructively and intelligently of the war and business. The services of writing men in this war are, I think, too little appreciated, although literary skill and power have been tremendous factors in the conflict. We need only to refer to the addresses and writings of Lloyd George and President Wilson, as well as to the deliverances of professional journalists, to realize this. The prosecution of this war and the conduct of business are co-extensive. Each has influenced the other until we have methods of war that are really more industrial than military, and methods of business that are more military than industrial. The business men of the United States are taking orders from Washington just like soldiers. Their patriotism is equally high, and they welcome the discipline and sacrifice imposed by the supreme necessity.

It is appropriate to discuss war and business at a dinner of this kind, because victory in the conflict is contingent upon education of the public to the new policies necessary to place our commercial and industrial power effectively in the scales of war. It is no less important that we emerge from the struggle as sound as the ravages of battle will permit. Unfortunately the sacrifices of war are not spent wholly upon its participants, but continue into subsequent years, decades and generations. The war task which has, perhaps, attracted most attention is the building of ships, but it is not my purpose to impose upon you a recital of the vast tonnage laid down, mostly in yards newly built.

We are building ships not alone for the war, but for the future of world trade. Remember that once their part in the winning of the war is ended, a large number of them will be engaged in bringing back to home and industry the victorious soldiers and in transporting to Europe the materials necessary for reconstruction of normal life freed from the menace of avaricious autocracy. These vessels will serve the commerce of other nations equally with our own.

And if there are any men among you who doubt that we are going to have a vast fleet, I will simply ask you whether you have heard of a well-known man in our organization whose name is Charles M. Schwab?

The transfer of these vessels to peaceful commerce at the end of the war will be a rather complicated problem. They are being constructed because, and only because, of war needs under conditions and pressure which have enormously increased their cost per ton over the cost of construction prevailing in normal times. It would seem fair that their valuation be written down to a point which will give them a fair chance to compete with vessels built before the war at much lower cost.

The immediate problem is first to transport men and supplies to Europe, but it must not be forgotten that the lines of supply do not originate wholly in the United States, but are fed by streams of imports of raw material derived chiefly from the markets of Latin America and Asia. These imports should be paid for, so far as possible, by exports of our own merchandise necessary for their needs. Adverse trade balances should be corrected by increased exports whenever possible. These markets have been cast by the war into an intimate economic relationship with the United States, the maintenance of which is indispensable to the powers opposed to Germany.

The prosecution of the war is quite as dependent upon the continued productivity of Latin America and Asia in basic metals, tin, nitrates, wool, rubber, hides, foodstuffs, etc., as upon the productivity of the United States and the British Empire. With Germany's extension of influence eastward, it is not unlikely that the war will become even more than hitherto a match of resources equally with the matching of arms.

American vessels are now being replaced in Latin American and Asiatic trades by neutral and Japanese tonnage, bought or chartered, so that for the time being the American flag will be less evident in those waters than for the last year or two, but if our expectations are fulfilled it should be possible by this time next year to see the return of a large number of American ships to the non-European trades. This, it is hoped, will go far towards the re-establishment of the American transportation facilities necessary to maintain commerce, but even if that could be wholly accomplished the situation of our Latin American and Asiatic neighbors would remain still far from normal. Prior to the war their commercial and industrial development proceeded largely upon capital borrowed from Europe. This source of finance for three years has been cut off, with the result that railroad extension, industrial construction, power development and public works have been seriously curtailed.

Our war industry, therefore, depends in no small degree upon countries handicapped for lack of capital. Even in normal times no prudent merchant would depend upon factories insufficiently financed.

Our opportunity and our necessity are now interlocked.

You and I, when we require credit, go to the banker who believes in our integrity, and foreign governments and business interests, when they require credit, go to the nations that believe in their integrity. Latin America and Asia need, and have been asking for, American capital. The present demands on the United States may be such that extensive financing is now not possible, but we should proceed to make our surplus capital available to the sister republics and to the countries of Asia at the earliest moment consistent with our war finance policy. The two are closely related. We should look forward to assisting these countries in extending their railroads, both steam and electric, financing the municipalites on sound and conservative lines, and become interested more extensively in their mining properties, particularly the materials required in the United States. All nations are now more jealous than ever of their independence of others in supplies of raw materials. The American policy is not to monopolize raw supplies, and our interest should be pro-

(Continued on page seven)

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published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

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District 9—L. O. Ripley, Po. 7042V, Ajax, Wichita, Kan.
District 10—Henry N. Remington, Po. 678V, Argus, Peoria, Ill.
District 11—William T. Wallace, Po. 1716, Asphion, Boise, Idaho.
District 12—H. L. Woolfenden, Po. 1062V, Atlas, Denver, Colo.
District 13—J. N. Colkitt, Po. 2627, Comus, Los Angeles, Cal.
District 14—P. T. Davies, Po. 8818, Chiron, Montreal, Can.
District 15—George L. Guy, Po. 4727 Cadmus, Winnipeg, Man.

Ell C. Bennett, Po. 3932-13V, Mercury, St. Louis, Mo.
In Charge of Central Offices.

PAST JUPITERS' ASSOCIATION, 1916-17

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C. W. HOBSON, Po. 1
Past Jupiter One, Dallas, Texas.

Vice-President

W. E. ROBERTSON, Po. 424-6V
Past Jupiter Six, Buffalo, N. Y.

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Past Jupiter Three, Chicago, Ill.

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OSCAR C. TURNER, Po. 333-3V
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Past Jupiter Nine, Colorado Springs, Colo.

ROBERT L. JAYNES, Po. 1421-50
Past Jupiter Ten, Massaponax, Va.

FRANK E. WATTS, Po. 1509-47
Past Jupiter Eleven, New York City.

W N. MATTHEWS, Po. 496-44V
Past Jupiter Twelve, St. Louis, Mo.

HOMER E. NIESZ, Po 306V
Past Jupiter Thirteen, Chicago, Ill.

THOS. A. WYNNE, Po. 11457V
Past Jupiter Fourteen, Indianapolis, Ind.

HENRY L. DOHERTY, Po. 3208-33
Past Jupiter Fifteen, New York City.

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THE NEED OF UNIVERSAL CO-OPERATION

THERE are thousands of precedents to show that co-operation, fully applied, will result in far greater benefits than when partly applied.

No more specific instance of this can be cited in modern business affairs than the tendency among some of the Leagues of the Jovian Order to neglect the advantages of national co-operation. These Leagues are firm believers in co-operation in local affairs. They practice the principle to the limit of its advantages, but there they stop. They have their own organization which they utilize effectively; they know there are a number of other effective organizations seeking the same results and yet they neglect the tie that would bring them together for the general benefit of the industry.

There is just this to be said in favor of sectional co-operation—it is good as far as it goes. There is this to be said against it—it is not utilizing the full potentiality of the forces at its command, because no one section has, or will ever have all the good that is in the industry; no one section has or will ever have all the knowledge concerning benefits to the industry; no one section has or will ever have sufficient power to develop as effectively alone as it would have by the co-operation of other sections.

From every practical standpoint, if co-operation is a benefit to a part of an industry, is it not of greater benefit to the entire industry? If benefits can be acquired by the co-operation of two persons, can not greater benefits be acquired by the united efforts of more than two persons striving for the same results?

The effective development of an industry like the electrical industry depends greatly on the amount of knowledge it derives from research and experience. It would be folly to assume that persons operating in one section can acquire as much knowledge as persons operating in every section covered by the industry.

This is just one of the many beneficial features lost by sectional co-operation alone. There are numerous other benefits to be derived by tying the entire industry together in such a manner that it will work in harmony and take advantage of every proven beneficial feature. The benefits to be derived from the avoidance of unprofitable features that have been proven unsuccessful or undesirable are of almost equal value.

One of the important functions of the Jovian Order is to render this universal service of distributing knowledge, plans and advice. The central offices of the Order occupy the position of a clearing house for this kind of co-operation between the various sections and branches of the industry. In its performance of this function it operates through the only element possible for the rendition of such a service, namely, the human element or human side of business.

As is well known, co-operation of any kind, to be effective, must be voluntary. Its very foundation depends upon the co-ordination of self-interest with common interest, making for general advancement, progress and development. The principles of enforced co-ordination in business had been proven a failure many years before the Jovian Order was founded. Consequently, the Jovian Order was based on voluntary acquiescence to the fundamental principles it represents. The Order must look to those who believe in these principles of co-operation to such an extent that they are willing to back their faith by action.

The Order today is in a position to render a greater service to the industry than ever before in its history, for two reasons; first, because the industry is in greater need of its harmonizing and co-ordinating influences, and, second, because

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it is the ONLY organization within the industry that occupies a position to bring about such a unity between all the sections and branches of the industry.

It can not bring about the results desired without the co-operation of all organizations of the industry; no organization can be effective if split up into sections working at random. There must be a head, an executive body, with indorsed representation from the sectional bodies. All of which the Jovian Order has. It is equipped for constructive harmonizing action.

The one thing needed is a greater amount of voluntary action directed towards the work of promoting the universal co-operation of the electrical industry, by cementing the sectional organizations more closely together.

* * * *

ST. LOUIS LEAGUE WINS FIRST HONOR FLAG OF ORDERS IN CITY LIBERTY LOAN DRIVE

THE ST. LOUIS Jovian League went "over the top" in the Third Liberty Loan drive ahead of all other fraternal and industrial orders in St. Louis. One hundred per cent subscriptions for the League was reached on the evening of April 24.

Cliff R. Croninger, Po. 9624, as chairman of the League Third Liberty Loan Committee, made a personal canvass of the entire membership.

The honor flag was presented at the regular luncheon meeting of the League held at Union Electric Hall, Tuesday, April 30, by G. Prather Knapp, representing the Eighth Liberty Loan District chairman.

An appropriate address of acceptance was made by W. N. Matthews, Po. 494-44, Past Jupiter Twelve, president of the League.

The following day, May 1, the League paraded through the city to promote the sale of bonds.

Headed by the Great Lakes Naval Band, the parade started from the Missouri Athletic Club at 12:15, in two divisions. The first, under the command of Colonel Harry D. McBride, Po. 13817, the second under Major C. E. Michel, Po. 7061. Lieut. Loren M. Wood, Po. 914, in charge of right, and Lieut. C. B. Kennedye, Po. 13814V, of left line of march.

Mayor Henry Kiel, Po. 12312, and President W. N. Matthews, Po. 496-44, headed the parade.

At the municipal square on Twelfth street, the terminus of the parade, patriotic addresses were made by President Matthews, Mayor Kiel and Mr. Harrison.

* * * *

Speech of Edward N. Hurley

(Continued from page five)

tected against the denial of essential materials to us by any others.

Other nations are making ready to meet the conditions that will arrive with peace. Germany is organizing for trade as she organizes for war. Our Consul-General at London reports that Great Britain has set in motion a vast organization for the study and promotion of after-the-war trade.

What are we doing? What are we planning to do? When ships are ready for commerce after the war, will our merchants and manufacturers be ready for greater overseas enterprise?

The "Webb" bill authorizing co-operation in export trade is now a law, but this is not sufficient without the spirit to take advantage of it and the knowledge on the part of the business men that their ventures into foreign markets will be supported by a strong national policy tending to encourage efficient production, convenient finance and cheap transportation. It is not a question of choice or preference. The productive capacity of this country had exceeded consumption even before the European war began in 1914. The capacity has since been vastly expanded to meet the needs of war. It is so with other countries. This implies a keener competition in which the United States must be successful if labor is to be kept employed.

The share of world trade to which America aspires is that to which the resources, the skill and energy of our people entitle us in fair and friendly competition with the nations who are at once our customers and our suppliers of materials and merchandise.

The entire world knows that the United States entered the war without selfish intent. We have financed our associates on a scale of unparalleled liberality. Our Commander-in-Chief instantly yielded the natural aspiration for our army to operate as an American army in France and ordered that it be brigaded with the British forces. President Wilson advocated a single command on the Western Front, knowing that that command would pass to a general of another nationality. With this record, none can question the sincerity of our purpose if we give to preparation for after-the-war commerce a part of the time and study their complexity deserves. In so doing we will be working for the right of our victorious soldiers to as sound and profitable employment as national policy can assure. Unless we continue to develop our foreign trade after the war we can have no enduring prosperity.

E. A. WILCOX, Po. 6830V, Twelfth Mars, manager of the Public Service Company, Tulsa, Okla., whose activities have been instrumental in advancing Jovianism in every city in which he has resided. Tulsa has come to the front as a Jovian stronghold in the Southwest largely through his capable and energetic leadership

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"THE SCIENTIFIC SELECTION OF SALESMEN"

Address of MARTIN J. WOLF
Vice-President, W. N. Matthews & Brothers

At the Problems Course Luncheon of the Sales Managers' Bureau, St. Louis Chamber of Commerce, February 21, 1918

A SALESMAN, if he is rightly picked, is a real sample of the institution of which he forms a part. You can't divorce him from the institution any more than you can divorce the institution from the salesman. So for that reason you can't very well discuss the Scientific Selection of Salesmen without speaking of the institution, because they are both indissolubly linked.

The thing that makes your business institution possible is your Policy. In other words, the "IDEA" around which you group your business. First, you must have a selling plan. You must be able to outline or visualize exactly what you propose to do, the form of service that you propose to render. I don't care whether you put your own money into the institution or secure funds of others, money is secondary to the element of service that you are going to give. This service thought is labeled "Policy". Then come finance, factory selling. In other words, your selling organization is like the cutting edge of a knife, and you have got to view the sales organization in that light if you are going to give to the sales organization the position within the organization to which it is truly entitled.

In my estimation, it is more important for a salesman to pick his house than it is for the house to pick the salesman, for the reason that the salesman is giving every bit of his business capital, which is his energy. Consequently, the salesman of tomorrow who is thoroughly on the job is going to question the house as to what it will contribute to his success, since, roughly speaking, three-fourths of his success is made possible by factors beyond his (the salesman's) control.

A good many salesmen take the attitude that the house does them a favor to put them on the pay-roll. That is all wrong. The institution back of the salesman must contain the elements of firmness, force and direction, but these require a keen cutting edge in order to be truly effective. Your sales department is the cutting edge of your "knife."

Policy, broadly speaking, means ideas about the goods, the need the product fills, knowledge of markets, general plan of distribution—all of the things that normally go to make up the efficient direction of an institution. Finance means capital invested in the business, credits, collections, etc. Production means the making of goods for distribution. Selling is a question of getting the goods from where they are produced to where they are needed. So an institution has four general divisions and each varies in strength and development, depending upon the strength of direction and development brought into play. You must have tune in the business. The true institution is the one that is rightly balanced, depending upon the form of service it is giving. If you have a capable executive, a man who has in mind the true element of tune in connection with his business, who sees that all departments are in proper balance, each carrying its just load, one not poaching on the preserve of the other, then you have the basis of an effective result-getting organization—success.

When you begin to form the business-getting branch of your organization you have three elemental things to consider.

First: Policy.

Second: Men.

Third: Information.

When you look at the matter from the standpoint of company policy, that, as I visualize it, means the correct interpretation of the service function of the other three elements within the institution, as well as the true relationship of the selling department to the intermediate and eventual customer.

In these days you can't sell a man with a view of forgetting the sale as quickly as you have made it, but must realize that those goods are not sold until they reach the hands of the ultimate user.

The only kind of man who is going to do good work for you is the man who understands the theory—the idea back of your merchandise, who thoroughly understands and is in sympathy with the relationship that should exist between your institution and the trade, and who thoroughly understands the element of a square deal to the customer. By square deal to the customer, I don't only mean doing exactly what you have agreed to do, but doing "that something more" that is so essential in building up the kind of good will that lasts for generations. You must have broad-gauged men, business ambassadors, that are capable of doing business broadly. Only broad men can fully appreciate a broad policy.

Speaking of men, I have always thought that Sheldon's formula for a salesman was better than almost any other I ever heard of. If you remember, his formula was A-R-E-A. A for Ability, R for Reliability, E for Energy and A for Action. That comes pretty near summing up the type of man that you need for any kind of work, be it salesman or any other kind. I always like to put one more element in before any of these, and that is the Service Viewpoint. By that I mean that willingness to do for the other fellow without too great a degree of urging, the desire to be a real help to the other fellow. Practically speaking, a well developed Service Viewpoint means the Religion or Spirit of Service. Spirit of Service is the thing that I think wins trade, that links men together. When spirit of service is lacking you have a serious lack in your organization. A man must be a real lover of humanity. You never saw a truly successful salesman who didn't instinctively love humanity, one who applied every day of his life the spirit of the Golden Rule. You must have that to start with. When you hear a man complain that he doesn't understand somebody else, that he cannot get close to a prospect, it is because he lacks sympathy with that "somebody else." You must be in sympathy with anybody that you expect to influence. You must appreciate his problems. In my estimation, you must have that before you have any other quality. In fact, the first thing a good salesman does is to get a real "point of contact." If a man is selling a staple, he must be capable of being in sympathy with the particular line he is handling. If you are selling a line of jewelry, a man who might be a hundred per cent success in hardware would fall down for you. That is fundamental, because a jewelry salesman must be in sympathy with jewelry, while a hardware salesman liking coarser, heavier things, would not appreciate the aesthetic point of view of the jewelry field. Your hardware salesman's viewpoint is more tangible, while jewelry values are more intangible in nature.

Gentlemen, as I see it, the biggest step taken in the last ten years in the selection of salesmen has been to realize clearly and distinctly the difference between tangible and intangible values in selling. Today we are selling the "performance," not the "intrinsic" values of our merchandise. Does an Alexander Hamilton Institute man sell you paper, ink and binding? He does not. He visualizes to you what can be done in a success sense by absorbing the contents of a Reading Course. A railroad ticket doesn't represent what you bought when on a trip or about to start a trip. But that ticket or

(Continued on page fifteen)

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PERSONAL POINTERS

Old friend of mine tho far
away,
And many years have passed
and gone
Since last I saw you on
that day
We parted, here I gaze
upon
Your name and in my
memory
Recall the pleasant hours
spent—
These simple lines about you
free
The wings of thought long, long
impent.

* * * *

H. C. GOLDBICK, Po. 1756, who was recently transferred from San Francisco to Washington by the Western Electric Company, is now connected with the New York office of that company.

* * * *

H. W. STEELE, Po. 960, division superintendent of the El Reno division of the Oklahoma Gas & Electric Company, has been appointed local chairman of the Military Training Camp Association.

* * * *

G. T. MARCHMONT, Po. 4475, for the past four years assistant sales manager at Richmond, Va., for the Western Electric Company, has recently been promoted to the position of sales manager for the company at that point.

* * * *

GUY R. HASTINGS, Po. 18762, has recently been appointed manager of sales of the Chicago office of the National X-Ray Reflector Company. Jovian Hastings was formerly sales engineer for the company.

* * * *

A. PATTERSON, Po. 13916, formerly electrical superintendent of the Southwestern Gas & Electric Company, Texarkana, Ark., has been appointed engineer and engineer of overhead construction of that company.

* * * *

EDWARD A. BULLIS, Po. 18926, formerly with the Federal Sign System (electric) of San Francisco, Cal., recently severed his connection with that company and is now with The Electric Company of Philadelphia.

* * * *

CARL GOLIN, Po. 12385V, Statesman-at-Large, has resigned his position as manager and treasurer of the Northwestern Storage Battery Company, and is now connected with the Sales department of the U. S. Rubber Company, mechanical division, 41-45 Oneida street, Milwaukee, Wis.

* * * *

LOUIS A. FERGUSON, Po. 12249, vice-president of the Commonwealth Edison Company, Chicago, Ill., has been appointed a member of the auxiliary committee of the Capital Issues Committee, Chicago Federal Reserve District.

* * * *

R. E. BROWN, Po. 12745, of Boise, Idaho, manager of the Mankato division of the Northern States Power Company, was recently appointed county chairman of the War Savings Stamp Committee for the County of Blue Earth, Idaho.

SAMUEL W. GREENLAND, Po. 6161, who is general manager of the Northern Indiana Traction Company, has obtained a leave of absence from his company to supervise the construction of a Government power plant at Baltimore, Md., to be used in connection with a munition factory. Since the beginning of the war Jovian Greenland has taken an active part in patriotic work, such as Liberty Loan sales, Red Cross and Y. M. C. A. campaigns and other movements in his home city, Fort Wayne, Ind.

* * * *

W. L. MILLER, Po. 18421, of Galina, Ill., manager of the Interstate Light & Power Company at that point, has been appointed secretary for the Third Liberty Loan drive in Jo Daviess County, and manager of the Publicity campaign.

* * * *

F. A. C. TOCQUE, Po. 13340, new business manager of the Fort Smith (Ark.) Light & Traction Company, has enlisted and passed the necessary examinations for entrance into the Canadian officers' training camp and has sailed for England.

* * * *

THOMAS E. GRIFFIN, Po. 5230, until recently superintendent of the mechanical department of the Dispatch Publishing Company, Pittsburgh, Pa., is now treasurer and general manager of the Dickinson Manufacturing Company, Springfield, Mass.

* * * *

JAMES W. MOREY, Po. 2781, has joined the staff of Hathway & Knott, Inc., New York City, and will travel the Southern territory of Pennsylvania. He was until recently manager of the New York branch of the Multi-Refillable Fuse Company.

* * * *

A. J. GATES, Po. 5620, has become connected with the Baker, Rauch & Lang Company, Cleveland, Ohio, handling the sales of industrial trucks. He was formerly connected

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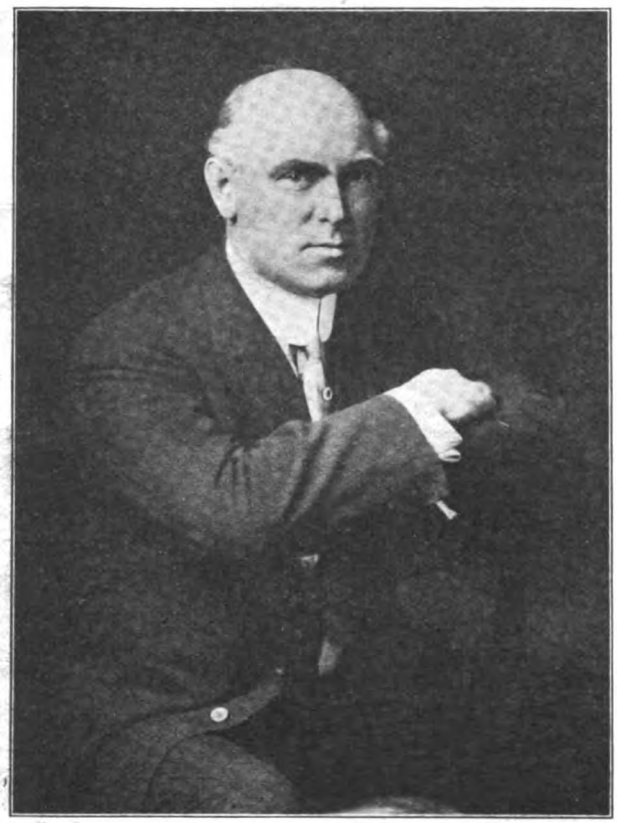

GEORGE C. ROUGH, Po. 512V, Twelfth Hercules, who is well known to Jovians through his interesting contributions to The Jovian, has been elected president of his company, The Packard Electric Company, St. Catharines, Ont. Jovian Rough has held the position of secretary and sales manager with the company for a number of years. In the language of Jean Baptiste Trudeau, "de gang tink it fin', Georgie, an' sen' de 'gratulations"

with the sales department of the General Electric Company in that city.

* * * *

A. C. CARSON, Po. 13999, until recently general manager of the Eastern Wisconsin Electric Company, Fon du Lac, Wis., has resigned and is now assistant to the vice-president of the C. C. Smith Public Utilities in Wisconsin, with headquarters at Manitowoc.

* * * *

ALBERT M. GRALL, Po. 4112, was recently appointed new business manager for the Ashland Gas & Electric Company, Ashland, Ohio. He was formerly representative of the new business department of the Empire District Electric Company, Webb City, Mo.

* * * *

FRED B. GLEASON, Po. 1265, who has been Southern district manager for the Western Electric Company, with headquarters at Atlanta, Ga., for the past eighteen months, has been transferred to the New York office of the company and made contract sales manager.

* * * *

HOWARD B. HALL, Po. 1370, formerly manager of the Richmond, Va., branch of the Western Electric Company, is now manager of the Atlanta, Ga., branch of that company. Jovian Hall has had charge of the Western Electric Company branch at Richmond for eleven years.

* * * *

HENRY L. GRANT, Po. 3222, sales manager for the Western Electric Company at Chicago, who has been with the Chicago office of the company in different capacities since 1902, has recently been assigned to special work in the sales department of that company's New York City office.

* * * *

W. W. HANKS, Po. 5014, formerly superintendent of the electrical department of the Charlotte (N. C.) branch of the Southern Public Utilities Company, is now actively interested in the Electric Repair Company of Charlotte.

* * * *

WILLIAM F. WOLFF, Po. 12677-53, president of the William F. Wolff Company, New York City, announces that he has appointed The S. W. Electric Company, 144 East Thirty-fourth street, New York, as sole distributors for the products of his company, lamp brackets and specialties.

* * * *

JEROME D. KENNEDY, Po. 8149, has been transferred from the Philadelphia branch of the Western Electric Company to Hawthorne and given the management of the general sales department of the company. He has been connected with the Western Electric Company since 1899, beginning service at the company's New York branch in that year as an engineer.

* * * *

H. J. NEWBILL, Po. 16855, has been promoted from the position of district manager of the Stantonville Telephone Company, Tupelo, Miss., to that of assistant to the vice-president of the Allen Telephone Properties. He will specialize in handling matters pertaining to traffic, and will continue making his headquarters at Tupelo.

* * * *

G. E. SWETT, Po. 5576, has resigned as sales agent of the General Electric Company, Seattle, Wash., to enter the employ of the Pacific Machine Shop & Manufacturing Company of that city. He will assist in handling the complete line of auxiliary electrical equipment for ships manufactured by that company.

* * * *

W. RUSSELL PATTON, Po. 1090, Fourteenth Argus, of the Globe Electric Company, Milwaukee, Wis., was married April 6, to Miss Marguerite E. Houart. Jovian Patton is one of the best known men in the electrical industry in the Middle West. Previous to his connection with the Globe Electric Company he was with the Wagner Electric Manufacturing Company at Chicago. We extend the congratulations of the fraternity.

* * * *

A. R. MANLEY, Po. 18258, has tendered his resignation as district manager of the Wisconsin-Minnesota Light & Power Company, Eau Claire, Wis., to engage in the brokerage business. He will specialize in investment securities. Jovian Manley had been district manager for the Wisconsin-Minnesota Company since it took over the Chippewa Valley Public Utilities.

* * * *

KURT R. STERNBERG, Po. 7612, has resigned his position with the Dickinson Manufacturing Company, Springfield, Mass., after being connected with that company for twelve years, to take up the work of consulting chemist. Jovian Sternberg has devoted many years to the development of heat-proof electrical insulations, and will specialize in moulded electrical insulations, hot and cold pressings, and heat, mechanical, electrical, oil, acid and water resistance tests.

* * * *

FRANK V. BURTON, Po. 1179, has been appointed general sales manager of the Bryant Electric Company of Bridgeport, Conn. The position is a newly created one. Jovian Burton was formerly eastern sales manager for the company, a position he has held since 1907. He has been affiliated with the Bryant Electric Company since 1902, having entered its service as service correspondent at that time. Prior to going with the company he was engaged in the electrical contracting business at Albany, N. Y., and later was connected with the contracting firm of Berger, Rogers & Potter at Troy, N. Y.

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W. P. SOUTHARD, Po. 16108, has been transferred by the Federal Light & Traction Company from the management of the Albuquerque (N. M.) Gas & Electric Company, to Trinidad, Colo., and made manager of the Trinidad Electric Transmission Railway & Gas Company. Prior to assuming charge of the Albuquerque company three years ago he was manager of the Las Vegas Light & Power Company.

* * * *

W. A. BRACKENRIDGE, Po. 17150, has been elected president of the Southern California Edison Company, Los Angeles, Cal. Prior to his election to the presidency, Jovian Breckenridge was vice-president of the company. He went to Los Angeles in 1909 to take the management of the Edison Electric Company, the predecessor of the Southern California Edison Electric Company.

* * * *

FRANK W. FRUEAUFF, Po. 1696V, vice-president Henry L. Doherty & Company, New York, was entertained as guest of honor at a dinner given at Delmonico's, New York, by 125 friends, on the evening of March 29, celebrating his forty-fourth birthday. He was presented with a handsomely bound copy of "The Pilgrim's Progress," containing autographic pages with the signatures of the hosts.

* * * *

FRED W. GODFREY, Po. 271, has severed his connection with the Republic Electric Company of Cleveland, Ohio, to become associated with the American Carbon & Battery Works, of the National Carbon Company, Inc., East St. Louis, Ill. Jovian Godfrey will look after the jobbing interests of the company in the Northwest territory, which includes the states of Minnesota, North and South Dakota, Nebraska, Colorado, Montana, Wyoming, Utah, Idaho and New Mexico.

* * * *

AINSLEY A. GRAY, Po. 2271, former managing editor of the Electrical Review, Chicago, and more recently president of the firm of Gray & Benjamin, advertising specialists, has been commissioned a major in the Ordnance Reserve Corps, in charge of the new publicity bureau, whose purpose is to coordinate the activities of the Ordnance Department and the industries through the medium of the technical and trade press. Jovian Gray served as vice-president of the Chicago Trade Press Association in 1913, and was elected president of the association in 1914.

* * * *

CHARLES R. AMMERMAN, Po. 11458, of the firm of Ammerman & McCall, engineers, Detroit, Mich., has received a commission as captain in the construction division, Quartermaster's Reserve Corps, and has been assigned to duty at Camp Custer, where he made a survey of the heating plant at the request of the Government. Captain Ammerman held a commission in the Five Hundred and Fiftieth Regiment, known as the Home Guards, before he was called by the Government to make the investigation of the heating system at Camp Custer.

* * * *

STEPHEN C. POHE, Po. 4635, has resigned as manager of the Electric Bond & Share Company, Bloomsburg, Pa., to become manager for H. B. Walbridge & Company of the Penn Public Service Company, at Clearfield, Pa. Jovian Pohe began his business career with the Berwick (Pa.) Light Company in 1902, and became manager of the company in 1907. When the company was merged into the Columbia Power, Light & Railway Company at Bloomsburg in 1909, he was made superintendent of new business, and was later appointed general superintendent. He has been active in association work in the state, serving as president of the Pennsylvania Electric Association in 1915.

ROMAINE MYERS, Po. 9394, consulting electrical engineer, Oakland, Cal., has been appointed state representative for the National Council of Defense, on the divisional lighting committee, for the State of California. This work embraces all the industrial and shipbuilding plants for the welfare of the worker, seeing that proper lighting facilities are installed for perfection of activities and conservation of eyesight.

* * * *

TERRELL CROFT, Po. 13683, whose books and articles on electrical subjects and problems have taken their place among the standard technical works of the country, and who for the past few years has devoted much of his time to educational work, will in the future direct his efforts more towards developing his consulting engineering practice. He will at present combine his efforts in that direction with his research in technical matters at his office at 33 Amherst Avenue, University City, Mo. Jovian Croft has had an extensive experience in engineering work, having been connected with a number of leading electrical corporations both in an advisory and in active engineering capacities.

* * * *

MARCH FOREIGN TRADE SHOWS INCREASE

MARCH imports and exports show a partial recovery from the decline in recent months, according to a statement issued today by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

Exports for March amounted to $531,000,000, an increase of no less than $119,000,000 over February. For the nine months ended with March exports were valued at $4,394,000,000, a decrease from the $4,637,000,000 recorded for the nine-month period a year ago.

Imports were valued at $242,000,000, a gain of $34,000,000 over February. During the nine months ended with March imports amounted to $2,084,000,000, against $1,818,000,000 a year ago.

Imports of gold during March amounted to less than $2,000,000, and during the nine months ended with March to $83,000,000, against $801,000,000 for the nine months in 1917. Exports of gold were valued at less than $3,000,000 in March, and for the nine months ended with March amounted to $181,000,000, against $150,000,000 in 1917.

Imports as well as exports of silver are somewhat larger this year than in 1917, the imports amounting to $7,000,000 in March and to $53,000,000 in the nine months' period, against $26,000,000 for the corresponding period in 1917. Exports of silver amounted to $13,000,000 in March, and to $72,000,000 for the nine-month period, against $59,000,000 in 1917.

* * * *

OBITUARY

CHARLES P. SEEGAR, Po. 20363, who for the past two years has been in the employ of the American Telephone & Telegraph Company, at St. Louis, met his death by drowning in the Meramec River, May 6. Jovian Seegar, who was twenty-four years of age, left a boat house on the river at 3:00 p. m. on that date in a canoe, alone. The canoe was discovered drifting unoccupied about an hour later, and his body was recovered May 7. Funeral was held, May 10, from his father's residence, 4410 Evans Avenue, St. Louis. He is survived by his father and mother, Mr. and Mrs. Charles A. Seegar, to whom The JOVIAN extends the condolences and sympathy of the fraternity.

* * * *

HUGH M. COLE, Po. 923, died at his residence, 2951 West Tenth Street, Oklahoma City, April 22, of tuberculosis, after an illness lasting four years. Prior to his illness he was connected with the Oklahoma Gas & Electric Company for fourteen years. He was forty-five years old and leaves a wife and two daughters, to whom The JOVIAN extends the sincere sympathy and condolences of the fraternity.

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

The Law of Life

By W. R. J.

THIS is the law of life,
The law of high and low;
Each one must bear his strife,
Each one must strike his blow.
A hot-house plant is fair
But when there is a need,
Fate seeks for those who dare—
Men of a hardy breed.

Why do men shield their sons,
And make them butterflies?
Through all creation runs
This error of the wise.
Prince, ruler, potentate,
Or men of wealth and fame,
Forget what made them great
When once they win the game.

Look back at those long gone,
Look on the ones that come;
The great man breeds a spawn,
The king an Absalom.
Each fought his upward way,
By toil and strife he won
As victor in the fray,
Yet raised a petted son.

What is the hope they hold,
To shield their sons from strife?
The conflict makes men bold,
And teaches ways of life.
Life's battles build the trait
Of manhood day by day;
The path that makes men great
Is not a Primrose way.

* * * *

QUESTIONS AND ANSWERS

Q. Dear Editor: Will some of your readers kindly tell me what is good for mosquitoes? N. A. B.

A. Personally we do not know. If any reader has had experience raising mosquitoes and knows what is good for them, will he kindly write N. A. B.?

* * * *

Q. If you have any knowledge on the subject, will you please inform me if there is a substitute for gasoline being manufactured? L. D. Y.

A. Certainly. Apply to any garage, but do not mention that you want a substitute.

* * * *

Q. What is meant by the term: "The eyes of the world are upon us"? Old Reader.

A. Evidently you are not a married man, O. R. Try making a speech if you do not contemplate marching up the church aisle to the hitching post. Either experience will give you the idea.

* * * *

Q. I am a young man of 22 and in love with an angel, but I do not make enough to support her. What shall I do? A. M. D.

A. First time we ever knew they needed support. How long have you been dead, A. M. D.? Are you in a position to give us any other information about conditions where you are?

* * * *

Q. Can you tell me what will take the shine off of a pair of trousers? Consistent.

A. The following formula will be found an excellent one for removing shine from clothing: First remove the apparel from your person. Search the pockets carefully, and remove all metallic and fibrous substances. Fold and place in a large galvanized vat. Next boil to a gentle bubbling one quart of coal tar. Stir into it one pint of river sand and one-fourth cubic foot of brown gravel. When thoroughly mixed, pour over the garment, rubbing well into the fiber of the burnished spots. Next sprinkle well with talcum powder or powdered borax before reattiring yourself in the garment. If this does not entirely remove the shine let us know; it is about the only thing we can think of that has not been tried unsuccessfully.

* * * *

Q. Will you kindly inform me what is meant by the "bivouac of the dead" as applied to modern business? A Reader.

A. The term is applicable to people in business who, to all outward appearance, exhibit no signs of life, whose mental proclivity tends towards density, whose activities are far below normal and who otherwise are "not at home."

* * * *

Ovar Da Top

By W. R. J.

MISTER Raemueller he keepa saloon,
Axa me how long I been ovar here;
Saya to me, "you go back pretty soon,
When da quit maka da wheesky an' beer?"

"Toney," he sa', "dis ees heluva place,
"Too much ees talk about dis liberty;
"Maka me seek eet ees beega deesgrace,
"Not half as good as ees in Germany."

He make longa talk about prohidabish
Cussa a heap an' he saya, "py tam!"
He saya to me dat he maka da wish
Da Kaiser come over an' whip Unkla Sam.

Crossa ma heart, Judge, I not sa' a word;
Axa da cops an' da ambulance man—
I gotta my papers—da Dutcher not heard—
I cleana heem up lika good 'merican.

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NEWS OF JOVIAN LEAGUES

St. Louis Serg. Maj. George Fellows, late of the Canadian Field Artillery, was the speaker at the luncheon meeting of the St. Louis Jovian League, April 2. Sergeant Fellows was wounded, gassed and taken prisoner in the second battle of the Ypres. He escaped after nine months' imprisonment. In his address he gave a vivid description of his experience.

Martin J. Wolf, Po. 6027V, Fifteenth Ajax, vice-president W. N. Matthews & Bro., Inc., presided as chairman.

The luncheon meeting of April 9 was under the auspices of the Wagner Electric Manufacturing Company.

C. B. Lord, general superintendent of the Wagner Company, gave an interesting illustrated lecture on, "Making War Munitions," in which he described the various kinds of munitions and guns being used at the front.

W. A. Layman, Po. 1166, Seventh Mars, president Wagner Electric Manufacturing Company, presided as chairman.

The meeting of April 16 was a patriotic one. Captain James W. Byrnes, Quartermaster's Department, U. S. A., was the principal speaker. He dwelt particularly on the harmonizing influence of the war, and close spirit of co-operation it was bringing about between Americans of different religious faith and political affiliations.

Colonel Harry D. McBride, Po. 13817, of the First Regiment, Missouri Home Guards, officiated as chairman.

Paul Rader, the evangelist, addressed the meeting April 23, taking for his subject, "Over the Top." His arraignment of the Prussian military power was the most logical and forceful address heard by the League this season. Advancing the idea that owing to their success in science and art the Germans have become so conceited that they have forgotten God, he recounted some of the atrocities they were committing to show to what a low moral state they have fallen.

A special feature of the meeting was the singing of Arthur and Mrs. McKee, musical assistants of Dr. Rader.

Judge Kelsoe presided as chairman of the meeting.

Michael O'Brien, president of the Railway Club, made an impressive Four-Minute Talk for the Liberty Loan.

The Electric Company had charge of the meeting April 30, which was held in the Union Electric hall and dining room.

C. Prather Knapp, representing the Third Liberty Loan Committee of the Eighth District, formally presented the League with an Honor Flag for being the first fraternal or industrial order in the city to turn in a 100 per cent subscription to the Third Liberty Loan.

After an appropriate response by W. N. Matthews, Po. 494-4V, Past Jupiter Twelve, president of the League, the curtain was raised, displaying the flag.

The Electric Company had arranged an entertainment consisting of a wrestling match, boxing contest and motion pictures, that was greatly enjoyed by the audience.

* * * *

Chicago The League gave a stag on the evening of March 28, at the Hotel Morrison. The attendance was about 400, and proved to be an enjoyable event.

H. A. Mott, Po. 17507, chairman of the Advisory Committee of the Electrical Industry for the State Council of Defense, announced that the Engineering Corps had been entirely filled, but there were still vacancies in the Signal Corps for men of draft age.

Major G. P. Morton of the Forty-sixth Canadian Infantry addressed the League April 4, and made an interesting talk of his experiences.

CLIFF R. CRONINGER, Po. 9624-60V, who as chairman of the St. Louis Jovian League, Third Liberty Loan Committee, was largely instrumental in winning for the League an Honor Flag for a 100 per cent subscription to the Liberty Loan. The St. Louis Jovian League was the first fraternal or industrial order in that city to be awarded an Honor Flag

A Four-Minute Talk of the Third Liberty Loan was made by Godfrey H. Atkins, a former member of the club.

"Financing the War" was the subject of an address before the League April 11, by Rufus C. Dawes, who is giving up a great deal of his time to war activities. He gave some amazing figures with respect to the finances involved in the present war, and particularly the startling sums of money being expended by the United States.

At the meeting the Liberty Loan booth, presided over by Miss Esther T. Anderson, reported the sale of $800 worth of bonds.

Eight new members of the Club were reported at the meeting.

Alexander Reichmann was the speaker at the meeting of April 18. Mr. Reichmann, who is a prominent Chicago attorney, has traveled extensively in France and Germany, and is closely associated with prominent Government officials in Washington. In his address he clearly defined the feelings of every American towards the present conflict.

W. P. Kennedy, electro-auto transportation expert of New York, was a guest and made a few brief remarks.

Chairman Bear of the War Activities Committee was present at the meeting, with six soldiers and sailors as guests.

An illustrated lecture entitled, "Facing the American Youth Towards Patriotic Citizenship," was delivered by the Rev. J. W. F. Davies, of Winnetka, Ill., April 25. He outlined the method adopted by the village of Winnetka in organizing the club activities of the boys and girls and various classes of citizens in that community along really constructive lines.

(Continued on page fifteen)

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L. M. KELSEY, Po. 11350, First Tribune, Galveston, Texas, whose activity in Jovian affairs in the Gulf city is making itself felt; a splendid new spirit of Jovianism is in evidence as the result. At the recent Rejuvenation held in that city Jovian Kelsey administered the lecture form of ceremony from memory

NEW YORK ELECTRICAL INDUSTRIES GO OVER 1000 PER CENT STRONG IN THIRD LIBERTY LOAN

BY GOING "over the top" 1000 per cent strong with Third Liberty Loan subscriptions, the committee representing the electrical industries of New York City was awarded an honor flag containing twenty-one stars.

The total amount of subscriptions turned in by the committee was $9,457,290.00.

The work of the committee was under the direction of General Chairman Theodore Beran, Po. 8622, and Vice-Chairman Jas. R. Strong, Po. 742-4, Sixth Pluto.

Chairmen of the various branch committees were as follows: E. D. Kilburn, manufacturers' branch offices; J. Nelson Shreve, manufacturers' division; George L. Patterson, Po. 733, jobbers' division; Louis Kalischer, electrical contractors and dealers; J. M. Wakeman, Po. 524, Fifth Apollo, electrical societies' auxiliary division; Wm. Walsh, inside electrical workers' division; Chas. M. Crowfoot, Po. 1182, manufacturers agents' division; A. Goldman, Po. 5358; J. C. Forsythe, Po. 4215, electrical inspectors.

* * * *

SOUTHWESTERN GAS AND ELECTRICAL CONVENTION

THE FOURTEENTH Annual Convention of the Southwestern Gas and Electrical Association was held at Galveston, April 15 and 16, with something over 150 members in attendance.

The discussions were vigorous throughout the session, indicating an unusual amount of interest in the various questions brought before the meeting.

As was advertised, the meeting was to be more in the form of a conference than of a convention. Entertainments of every nature were dispensed with, and only a few papers were read.

The topics which came in for special discussion were those of fuel for boiler purposes, labor saving machinery and apparatus, the present depleted labor supply, methods of increasing rates and legislation, both local and national.

The following officers were elected for the ensuing year: President, W. A. Sullivan, Shreveport, La.; First Vice-President, Burr Martin, Dallas, Texas; Second Vice-President, E. S. Fletcher, Dallas; Third Vice-President, A. Hargrave, Marshall, Texas; Secretary, H. S. Cooper, Po. 365, Dallas; Treasurer J. B. Walker, Po. 10692, Dallas.

MARCH REJUVENATIONS

MILWAUKEE

MILWAUKEE Jovians held a Rejuvenation at Pfister's Hotel in that city on the evening of March 28, and initiated five candidates. The affair was held in connection with the convention of the Wisconsin Gas and Electric Association which was convening in Milwaukee at that time.

After the Rejuvenation the members, guests and candidates repaired to Toy's Restaurant, where they participated in an enjoyable Joviation.

The principal speaker of the occasion was Sergt. Maj. Jock Anderson of the famous Princess Pat Regiment of Canada, who gave a description of his experiences during some of the severe fighting in which his regiment was engaged.

Henry Trester, Po. 17656, presided as toastmaster of the banquet.

First Tribune Jos. W. Pfeifer, Po. 10981, was in charge of the Rejuvenation and, according to reports, was rendered valuable assistance in making it a success by S. G. Haskins, Po. 7359; H. E. Brauns, Po. 16618; Chas. Brewster, Po. 15882; Carl Golin, Po. 12385V, Statesman for Wisconsin, and W. R. Patton, Po. 1090, Fourteenth Argus.

* * * *

CINCINNATI

CINCINNATI Jovians Rejuvenated thirty candidates at their Rejuvenation held at the Gibson Hotel in that city on the evening of April 4.

First Tribune F. D. Van Winkle, Po. 1683, was in charge of the initiatory ceremony. About thirty-five members and guests were in attendance.

Among the prominent candidates initiated were: A. L. Beedle, president of the Beedle Equipment Company; W. H. Quirk, manager, Western Electric Company, and H. L. Emmert, sales department, Post-Glover Electric Company.

At the Joviation, William Gansen Rose, L. D. Van Winkle, Po. 1683, and L. E. Trotter, Po. 3510, were the principal speakers.

Thomas J. Craighead, Po. 3013, presided as chairman of the Joviation.

The new League Year Book, which was just off the press, was distributed during the meeting.

Workers who, according to reports, deserve special mention for their activities connected with the affair, are: Chas. J. Smith, Po. 3036; O. Bird Marsh, Po. 17718, and Chas. Nolloth, Po. 1241.

* * * *

GALVESTON

FIRST Tribune L. M. Kelsey, Po. 11350, was in charge of the Rejuvenation held at Galveston, Texas, on the evening of April 15 . The Rejuvenation and Joviation was held at Roger's Oyster Resort, and was attended by 47 members and visitors, a number of whom were delegates to the convention of the Southwestern Gas and Electric Association, in session at Galveston on that date.

Eight candidates were initiated, the lecture form of Rejuvenation being used to perform the ceremony. Tribune Kelsey, so far as the knowledge of the "Jovian" extends, is the only person who has memorized the lecture form. In this instance he delivered it from memory, letter perfect and in an impressive manner.

At the Joviation held in connection with the affair, A. J. Binz, Po. 1921V, Thirteenth Neptune, presided as toastmaster.

Members who, from reports, deserve special mention for their activities in making the affair a success are: Fred S. Cassara, Po. 20343; V. L. Blanchard, Po. 10619, and A. L. Harris, Po. 10643.

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"Scientific Selection of Salesmen"

(Continued from page eight)

strip of paper does represent the right to be transported from one point to another. Frequently a man who can appreciate solid values like iron, steel and wood, when placed where an analysis of company policy or constructive merchandising must be convincingly shown, is unequal to the task. Why? Because by nature he cannot compute intangibles. He deals only with the tangibles.

If I had the chance to pick a salesman out of three candidates, one of the three having 80 per cent knowledge of himself, 10 per cent knowledge of his goods and 10 per cent knowledge of human nature, the second one with 80 per cent knowledge of his goods, 10 per cent knowledge of himself and 10 per cent knowledge of human nature, and the third 80 per cent knowledge of human nature, 10 per cent knowledge of himself and 10 per cent knowledge of his line, I would unhesitatingly pick the man who knew the most about human nature. I think it better to capitalize 20 per cent knowledge 80 per cent than to capitalize 80 per cent knowledge only 20 per cent. The man who absorbs what he knows always with the view of passing it on to others is the most valuable type of individual to get into your organization. He is very apt to continue growing. While realizing tangibles he uses tangibles to demonstrate the intangible values that are more potent business getting.

All of us who have been in technical lines have had experience with a man who would be sent from the factory and who knew all that one man could absorb about the technical product, but when he was put on the road he failed, he couldn't impart his knowledge to the other man. If we can get a man who knows human nature we should, so to speak, keep him at school, because the thing that we sometimes forget is that we ought to keep learning every day we live. If we just keep that fellow constantly training, we can frequently keep him from feeling self-satisfied, and then half of our organization troubles are over. We have found it a good plan to organize our men into committees and give them an insight into the bigger and broader problems of our business. The better trained your men are the bigger will be your business, and your business can't be any bigger ultimately than the bigness of your men, the bigness of your organization. It takes a man who is continually growing to weld new customers to your institution.

The first order that you get doesn't mean a permanent customer has been made. Even the second or third order doesn't mean that. But when your relationship has progressed to the point where a customer instead of "blowing up" the house merely says, "Oh! that's all right. Mistakes happen in the best of families. So and so will make it right." Then you can feel reasonably sure of your customer. He then represents a good-will asset.

You see, I've gotten away merely picking the man, because you cannot, or I feel that you cannot, successfully pick a man without having clearly in mind whether or not he can truly represent the Policy and Ideals of your institution and is teachable.

So, in conclusion, let me say that:

First. Broadly speaking, the institution of which the salesman forms a part represents three-fourths of the salesman's success problem.

Second. The selection of your salesman depends essentially upon his fitness to capably represent the institution's ideals.

Third. That your sales organization fundamentals are Policy, Men, Information.

Fourth. That the more constructive your policy the broader your men; the better organized their knowledge and information of intangibles the surer and the greater will be your company growth.

Jovian League News

(Continued from page thirteen)

Akron, Ohio The Akron League held an enthusiastic meeting at the Elks' Club in that city, April 9. About forty members were in attendance.

Albert Heidenrech, who has recently been engaged in engineering work at the Hog Island Shipyard, Philadelphia, was the principal speaker of the occasion. He gave a very interesting account of the progress of the work until the time he left.

He was followed by W. Kee Maxwell, editor of the Akron Evening Times, who spoke humorously on "The Relations of the Newspaper to the Public Utility."

A. C. Blinn, Po. 8246, vice-president and general manager of the Northern Ohio Traction and Light Company, also made an interesting talk on the problems that confront the public utilities at this time.

The question of holding a Rejuvenation in May was brought up and acted on favorably, although the date for the affair was not definitely set.

An orchestra composed partly of members of the League and a male quartette furnished the entertainment for the meeting.

* * * *

Cleveland Charles Woodward, president of the Industrial Association, gave a very convincing talk on industrial conditions before the League at its meeting April 4. He called attention to the fact that industry will be a big factor in the development of our nation after the war, and urged the teaching of the principle of industry so that we will "have the kind of thinking that will take the guess out of business."

The Cleveland Electric Illuminating Company gave a high-class concert to the members of the League Sunday evening, March 24.

Miss Lucille J. Darrah has succeeded W. D. Clark as secretary of the League.

Taking for his subject, "From the Grand Fleet to Flanders," Kenneth W. Payne, feature member of the Newspaper Association staff, took the members of the League "over the top" during his talk April 18. Starting his address by saying, "The people of America do not seem to realize that our nation is at war," he launched into a realistic description of conditions he encountered during his nine months "over there."

A. J. Reed turned in an unsolicited $2,500 Liberty Loan subscription from Mr. DeMooy to be credited to the League.

Major Ross C. Cockburn, of Toronto, Canada, a veteran of the Canadian Expeditionary Force, many times wounded in action, was the speaker at the luncheon meeting of April 18. Taking for his subject "The First Canadian Contingent," he held the interest of his audience throughout his address. His recital of the manner in which the first contingent went into the front line trenches and finally succeeded in driving the Germans back to positions where they stayed, held the membership spellbound.

Cards were received from W. G. Kidd, Owen V. Dotson, H. Piler and Wm. J. SeKola, privates in the American Expeditionary Force in France, acknowledging the tobacco the League sent the soldiers in France.

The speaker of April 25 was George A. Schneider, secretary of the Cleveland Athletic Club. His subject was, "Practical Patriotism." Report of Liberty Loan subscriptions at the previous meeting was made, and amounted to $13,250.

Ten members of the League volunteered to help George Harris in his house-to-house canvass for Liberty Loan subscriptions.

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JOVIAN INSURANCE

A COTTON COAT will furnish cover of a kind when nature has on her summer smile, but it will not protect you from the blasts of winter.

Neither does its cheapness recommend it as a bargain. It isn't a good coat under any circumstance.

A cheap article is frequently the most expensive in the end.

A substitute seldom stands the test of hard usage. It has its limitations.

* * * *

Limitations in an insurance policy make it an undesirable substitute for the real article.

An insurance policy that has one exception does not cover you fully. One that is punctured with exceptions leaves but a few ways in which you may be injured and recover indemnity. It is a risk in itself. Beside, you can't select your accident nor expect to be fortunate enough to have it the kind that is covered.

If your policy has these handicaps your accident or illness may very likely be the kind that is excepted, in which case you have paid out your money in good faith without being protected when the need arises. READ YOUR POLICY.

* * * *

Where assessments are possible the holder of such an insurance policy cannot determine in advance what the yearly cost of his protection may be. READ YOUR POLICY.

J
POLICIES AN
NOW

Single Accident Policy
Double Accident Polic
Single Health Policy
Double Health Policy
A Single Accident an
Single Health Polic
A Single Accident an
Double Health Pol
A Double Accident a
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A Double Accident a
Double Health Pol

Clip and Mail the Coupon Today

**As a Member of the Firm (
You Are Entitled to**

TODAY IS THE RIGHT TIM
INSURANCE FROM

IF YOU SO DESIRE, DATE YOUR APPLICATION TO TAKE EFFECT WHEN SOME OF YOUR PRESENT INSURANCE EXPIRES — PAY NOT UNTIL YOU RECEIVE THE POLICY.

THE JOVI

SYNDICATE TRUST BUILD

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WITHOUT EXCEPTIONS
WITHOUT ASSESSMENTS
AT COST

N
MBINATIONS
LABLE

	Annual Premium	Approximate Annual Savings
	...$12.00	$13.00
	... 24.00	26.00
	... 20.00	15.00
	... 40.00	30.00
	... 32.00	28.00
	... 52.00	43.00
	... 44.00	41.00
	... 64.00	56.00

THE expense of personal solicitation—the selling cost and other expense—of standard accident and health insurance ordinarily absorbs the big part of the premium. The commissions paid must be sufficiently large to attract the high-class salesmen required to meet competition and secure business. This entire cost is estimated as high as 52%.

If this 52% can be eliminated—if this middle-man's share can be disposed of—your accident and health insurance should not cost you more than half the present figure.

In other words, the standard $5,000 accident policy, ordinarily costing $25 per year, should be sold at about $12.

* * * *

SUCH insurance (both accident and health), without exceptions and without assessments, selling at the actual cost of protection, ***has been made possible by the*** CO-OPERATION established between the insurance company (issuing the policies direct), the ***Jovian Central Office*** (doing the solicitation and selling as an additional part of the free service rendered by this office), and the members of The Jovian Order, who are reaping the benefit of practically wholesale rates.

The accompanying table will give you a clear illustration of the big savings you can make by taking advantage of the rates offered.

Remember, this is ***your*** *Order, and this is* ***your*** *opportunity to save* ***your*** *money.* ***Your*** personal advantage is prominent all through the plan.

Every cent you invest in Jovian insurance goes to buy your policy.

Every dollar you save makes you just that much more able to participate in the patriotic activities required of us at this critical time for our country.

ıe Jovian Order)
'our Insurance *at Net Cost*

TO BEGIN BUYING YOUR
UR OWN CONCERN

N ORDER

ST. LOUIS

EVERY DOLLAR YOU INVEST IN JOVIAN INSURANCE, RELEASES NEARLY ANOTHER DOLLAR FOR YOUR OTHER PRESSING NEEDS.

Sign—Tear Out—Mail NOW!

THE JOVIAN ORDER

GENTLEMEN:

Send me complete information relative Jovian Accident and Health Insurance at greatly reduced rates.

(Signed) .....

(Address) .....

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PRACTICAL LESSONS IN ELECTRICITY

LESSON THIRTY-SEVEN

DIRECT-CURRENT ARMATURE TESTING AND TROUBLE LOCALIZATION

By TERRELL CROFT

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DIRECT-CURRENT armatures can be tested for the common troubles with the arrangement of Figs. 1 and 2. Terminals *b* and *c* are clamped to the commutator at opposite sides and connected with a source of steady current through an adjustable resistance and, preferably, but not necessarily, an ammeter. The terminals of a low-reading voltmeter (a galvanometer can often be used) are connected to two bare metal points, or "exploring terminals," which are separated by an insulating block, *j*, Fig. 1. Exploring terminals may also be arranged as shown in Figs. 2—*II* and 3. In use, the current is adjusted to produce a convenient deflection of the voltmeter when each of the points rests on an adjacent bar. The points are moved around the commutator and bridged across the insulation between every two bars. If the voltmeter deflection is the same for every pair of bars it indicates that there is no short circuit in the armature.

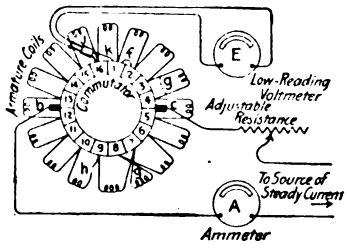

Fig. 1—Method of Testing an Armature

In testing armatures where only alternating current or low-voltage cells are available, a telephone receiver (Figs. 4, 5 and 6) may be used instead of an electrical measuring instrument for a detector. The variations in or appearance or disappearance of the sound in the receiver, as the test is being conducted, enables the operator to localize the trouble. The alternating current (Fig. 4) will cause a hum in the telephone receiver and the pulsating current produced by the vibrator (Figs. 5 and 6) effects the same result. The vibrator may be an ordinary vibrating bell or buzzer connected in series in the circuit as shown in the illustrations.

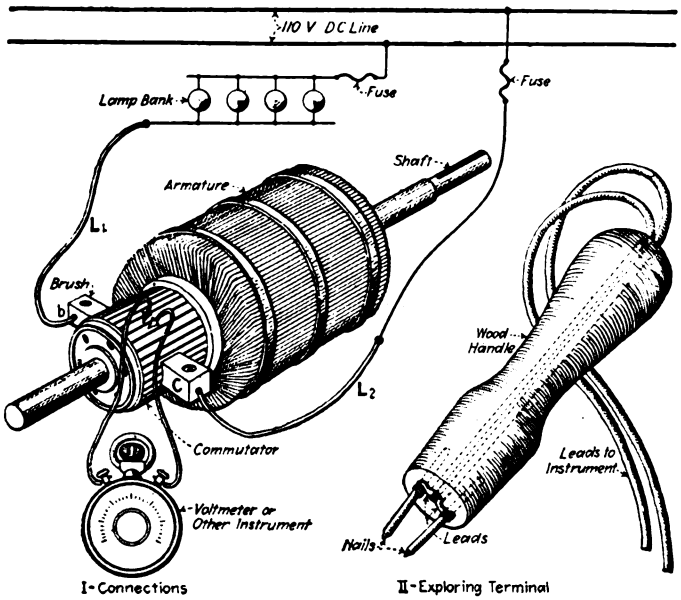

Fig. 2—Circuit and Equipment for Testing Direct-Current Armatures for Trouble With Direct-Current

High-voltage alternating current for testing armatures is sometimes used (Fig. 7) for high-resistance grounds which may not be detectable where a low e.m.f. is used for testing. Such high-resistance grounds may not in normal operation make their presence known until there is also a ground on the supply system feeding the motor. In using this apparatus, the procedure is merely to connect one terminal, *A*, of the high-voltage source to the commutator, and the other terminal, *B*, to the shaft. When the high voltage, *Eh*, is impressed on the armature, this will, usually, break down the insulation at the weak point and render the location of the ground apparent by the smoke which will emanate from the point of breakdown. Fuses, or circuit breakers, C_1, C_2, should be inserted in the supply circuit to prevent the disastrous effects of a short-circuit.

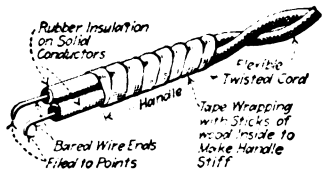
Rubber Insulation on Solid Conductors
Flexible Twisted Cord
Handle
Tape Wrapping with Sticks of wood inside to Make Handle Stiff
Bared Wire Ends Filed to Points

Fig. 3—A Type of Easily-Made Exploring Terminal

(The flexible cord leads are soldered to the solid copper wires within the tape-wrapping handle)

An alternating-current inducing coil is sometimes used for localizing armature troubles. Such a coil is illustrated in Fig. 8, while the methods of its application are illustrated in Fig. 9. The inducer is merely an alternating-current magnet having a U-shaped core composed of sheet steel laminations. The laminations should be interleaved and hinged at the point *H* so that the core may be opened or closed to most effectively accommodate armatures of different diameters. In use, the core should be opened to such a width that its two poles, P_1 and P_2, will have a separation corresponding to the throw of one armature coil. As shown in Fig. 9, the poles should not touch the armature iron when a test is being made, but an air gap of approximately one-quarter inch should be allowed.

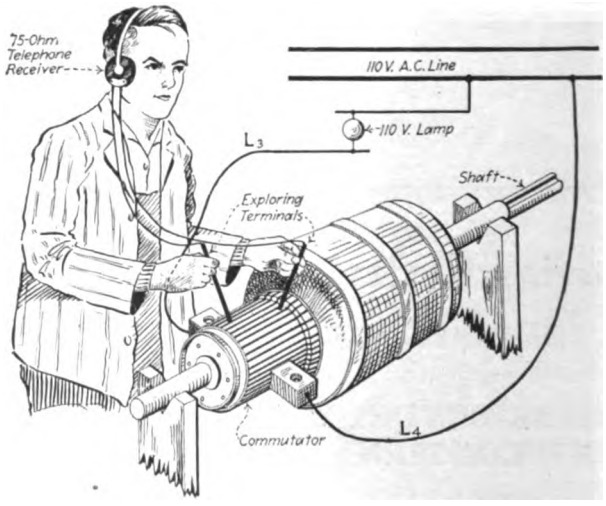

Fig. 4—Illustrating a Method of Locating Faults in an Armature with Alternating Current

The principle of operation of the inducer is this:—The alternating flux developed by the current in the inducer winding sets up an e.m.f. in the armature coils, and if a coil is short-circuited

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it will cause a current to circulate in that coil. Thus, in making a test the excited inducer is held over the armature, which is rotated. Now, if the armature is slowly rotated, while a small piece of metal (a test strip) is held lightly on the commutator so that it will bridge the segments between each of the bars there will be, as the armature is rotated, an arc produced each time one of the segments is bridged, provided the segments connect to a normal coil. But, if a coil is open, short-circuited or reversed, there will be no sparking. To determine whether the difficulty is due to an open or a short-circuit, the small iron test strip is

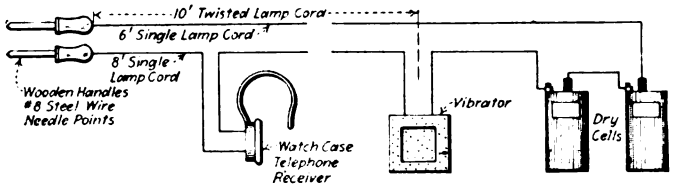

Fig. 5—Fault-Locating Outfit Consisting of Telephone Receiver, Vibrator and Dry Cells

bridged across the armature slots. Where the coil is short-circuited the induced current which will flow in it will create a flux around the sides of the coil which can be detected with an iron test strip which is moved over the armature coil slots. Furthermore, a short-circuited coil will be quickly heated by the local current flowing in it.

The telephone receiver detector used with the inducer, Fig. 9, affords a more accurate but somewhat slower method than that described in the preceding paragraph. To locate a short-circuit (Fig. 9—*I*), an exploring terminal connected to the receiver is

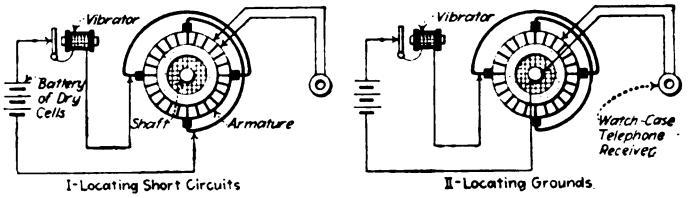

Fig. 6—Circuits for Locating Faults in an Armature with a Low-Voltage Source and a Vibrator

held on the commutator while the armature is rotated. When the exploring points are bridging a normal coil there will be a hum in the receiver due to the induced alternating current flowing through it. When the points bridge a short-circuited coil there will be little or no hum in the receiver, depending upon the number of short-circuited turns. When the exploring-needle points bridge an open coil, an alternating current of considerable intensity will flow through the receiver and a loud click will be heard. Where a coil is reversed, several of the coils adjacent to it will test "silent." To definitely locate the incorrectly-connected

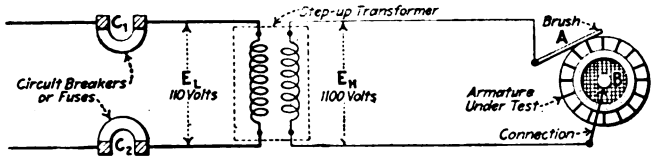

Fig. 7—Method of Obtaining and Applying "High Potential" for Armature Fault Location

coil, it will be necessary to raise some of the coils and trace them out by inspection. To locate a ground, the connections are made as shown in Fig. 9—*II*, and the armature is slowly rotated. When, as the armature is rotated, contactor *C* is on the segment connecting to the grounded coil, no sound will be heard in the receiver, but at other locations there will be a sound, the sound diminishing in intensity as the segment connecting to the grounded coil is approached. For locating partial grounds, this method may be ineffective, in which case that previously described involving a high alternating voltage whereby an insulation breakdown may be produced, should be employed.

A rack for testing small armatures using the methods of Figs. 1, 4 and 5, is detailed in Fig. 10. Ordinarily a man and a helper

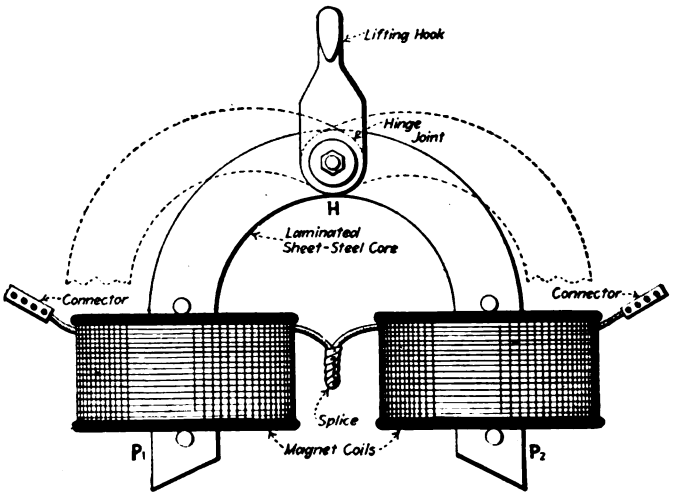

Fig. 8—"Inducer" Used for Locating Faults in a Direct-Current Armature Winding—It Induces an Alternating e.m.f. in the Armature Winding

are necessary in testing out an armature, but with the applicance shown one operator can locate the faults.

A convenient arrangement of a test lamp and exploring terminal is shown in Fig. 11. The flexible cord, and the indicating lamp, which also serves as a resistor for limiting the current, and the exploring terminal can be cut in series with the supply circuit by means of a fuse connector as detailed in Fig. 12. With this arrangement the testing set can be quickly cut in service at any point where there is a cut-out. Where it is used, it may be necessary to close the line with a temporary switch or otherwise on the load side of the cut-out. An Edison plug or a ferrule contact fuse can be used instead of the knife blade contact fuse of Fig. 12, by adopting obvious modifications.

A poor connection between a bar and coil leads will cause a considerable deflection of the voltmeter (Fig. 1) when one of the

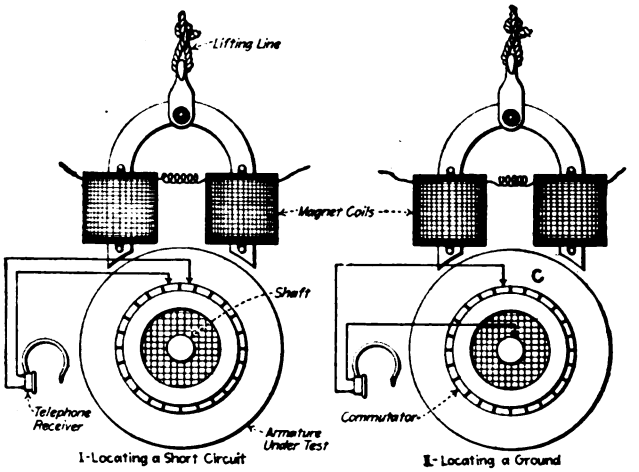

Fig. 9—Arrangements for Locating Short Circuits and Grounds with the Alternating-Current Inducer

points rests on the bar in trouble and the other rests on either of the adjacent bars.

An open-circuited coil, as *h*, Fig. 1, will prevent the flow of current through its half of the armature. There will be no deflection on that half of the armature until the "open" is bridged, when the voltage of the testing circuit will be indicated.

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Tests for open armature circuits.—Another method (Fig. 13) is to apply to the commutator at two opposite points, a low voltage, say from a battery or from a dynamo with a suitable resistance (incandescent lamps for example) in series. Place an ammeter in circuit and clean the surface of the commutator so that it is bright and smooth. The terminal ends leading the current into and out of the commutator should be small, so that each rests only on a single segment (Fig. 13). Note the ammeter reading and rotate the armature slowly. At the point where the open circuit exists the ammeter needle will go to zero if the leads to the commutator bar have become entirely open-circuited. This is because the segment is attached to the winding through the commutator leads.

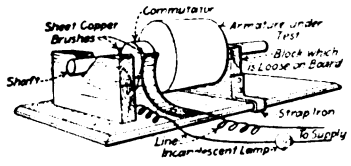

Fig. 10—Rig for Testing Small Armatures
(Electrical Review)

If the armature does not show the above symptoms, try connecting a low-reading voltmeter or a galvanometer to two adjacent segments while the current is passing through the armature as described from some external low-voltage source (Fig. 14). Note the deflection. Pass from segment to segment in this manner recording the drop between the successive pair of bars. This drop, if the current is maintained constant from the external source, should be the same between each pair of adjacent segments. If any pair shows a higher drop than the others near it, a higher-resistance connection exists there, perhaps causing sparking of the commutator isnulation, to a less degree, probably, than with an actual open circuit, but enough, perhaps, to cause trouble.

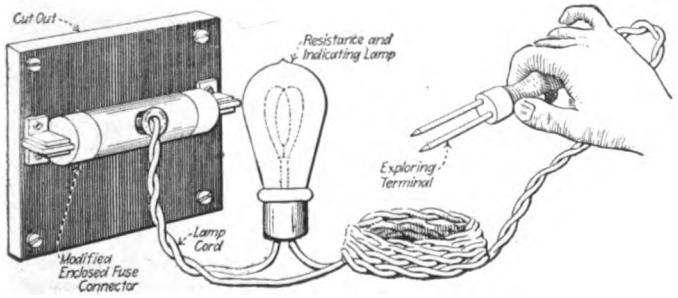

Fig. 11—Showing Application of the "Modified Fuse Connector" for Connecting Test Lamp in Series in the Testing Circuit

The test for armature short-circuits, described in the preceding paragraph, is called a "bar to bar" test. It is most valuable in locating faults in armatures. It is the method to use if a short-circuit from one segment to another is suspected. When the section in which the short-circuit, or partial short-circuit, exists comes under the contacts, a low or perhaps no deflection is shown on the galvanometer or voltmeter, thus locating the defective place. Such short-circuits, if they occur when running, owing to defective insulation, burn out the coil short-circuited. When the coil passes through the active field in front of the pole-piece, an immense current is induced in it, causing a destruction of the insulation. When this occurs the coil should be open-circuited if the burning has not already short-circuited it. If practical, it should be bridged over.

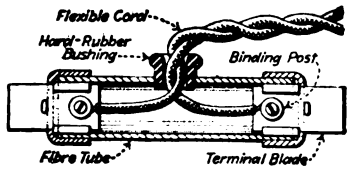

Fig. 12—Sectional Elevation of Fuse Connector

If two bars or a coil is short-circuited as at *f* and *g* (Fig. 1), respectively, there will be little or no voltmeter deflection when the two bars connecting to the "short-circuit" are bridged by the points.

A grounded armature coil can be detected in practically the same manner as indicated in Fig. 15 for a field coil. Fig. 16 shows the connections. Impress full voltage on the terminals *A* and *B* clamped to the commutator. Ground one side of the voltmeter on the shaft or spider, as at *G*, and touch a contactor *C* connected to the other side of the voltmeter to all the bars in succession. The minimum deflection will obtain when the bars connecting to the grounded coil are touched. A battery of dry cells, *E* (Fig. 16) having in series a resistor, *R*, may be used as a source of energy. A bank of lamps connected in parallel will serve as a resistor. Instead of using a voltmeter as in Fig. 14, a galvanoscope, *F* (Fig. 16), may be used. Such a galvanoscope may be improvised by winding a coil of wire around a pocket compass, but where this device is employed the galvanoscope must be used far enough away from the machine under test so that the compass needle will not be affected by the magnetization of the machine under test.

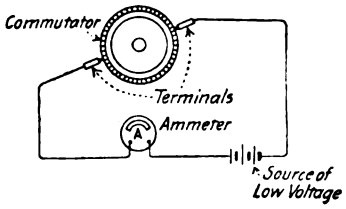

Fig. 13—Testing for Armature Open-Circuit with an Ammeter

Crossed coil leads as at *g* (Fig. 1) are indicated by a twice normal deflection when the points bridge the bars to which the crossed coils should rightly connect. The crossing of the coil leads connects two coils in series, hence causes twice normal drop. Bridging the bars to which coil *h* connects will produce a normal deflection, but it will be reversed in direction.

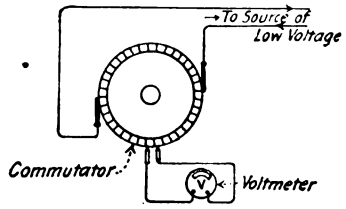

Fig. 14—Testing for Armature Open-Circuit with a Voltmeter

Reversed armature coil.—Instead of the armature winding progressing uniformly around from bar to bar of the commutator, there may at some point be a coil connected in backward. Such a reversed coil often causes bad sparking. One way to locate such a trouble is to pass a current through the armature, at opposite points on the commutator. Then with a compass explore around the armature the direction of magnetism from slot to slot. If a coil is reversed when the compass comes before it, the needle will reverse, giving a very definite indication of the improperly connected coil.

Heating of armature.—Heating of the armature may develop from any of the following causes: (*a*) Too great a load; (*b*) a partial short-circuit of two coils heating the two particular coils affected; (*c*) short-circuits or grounds on armature or commutator.

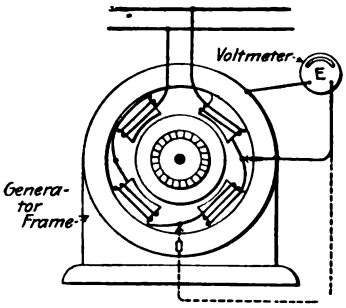

Fig. 15—Locating a Grounded Field Coil

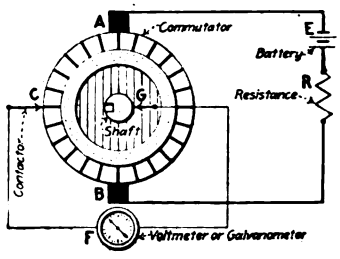

Fig. 16—Arrangement of Connections for Locating a Ground in an Armature

Hot armature coils.—Sometimes when a new machine is started local heating occurs in the armature, following the exact shape of the armature coil. This may be because, in receiving its final

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turning off, the commutator bars were bridged with copper from one segment to another by the action of the turning tool. An examination of the commutator surface will reveal this bridging. When it is removed, satisfactory operation will ensue if the trouble has not gone too far and seriously injured the insulation of the coil.

"Flying grounds," "flying short-circuits" and "flying open-circuits" sometimes occur in armature windings. These are intermittent troubles which may assert themselves when the machine is hot, after running under load, and its component parts expanded. Then when it cools, the trouble may automatically correct itself. Sometimes the reverse condition occurs, that is, the fault will be present when the machine is cold, but will be temporarily corrected when it is hot. Furthermore, centrifugal force due to the rotation of the armature may be a factor in the situation, in which case the defect may be present when the armature is rotated at normal speed, but not present when the armature is stationary. Obviously, such troubles are very difficult to locate. About the only way to localize them is to run the machine until the defect has "burnt itself out" or otherwise rendered its presence sufficiently evident that it can be located by the usual testing methods described above.

* * * *

CINCINNATI LEAGUE COMPILES YEAR BOOK

THE Central Offices are in receipt of a copy of the new year book of the Cincinnati Jovian Electric Club, which sets forth its purposes in a foreword as follows: "The purpose of this book is to furnish a ready reference to the business affiliation of each member of the Cincinnati Jovian Electric Club.

"All members and firms are indexed alphabetically with a number which refers to the order of the firm listing. The firm listing covers nature of business, telephone numbers, names of club members and products of each firm represented in the club.

"The roll of honor consists of the members of the Electric Club and the Jovian League who are now in the service of our country."

The year book contains much valuable information concerning the local industry and its members and will fill a great need as a book of reference.

* * * *

TO IMPROVE TRADE STATISTICS FOR WAR WORK

WITH the immediate object of furnishing more detailed and accurate information for the war boards engaged in licensing imports and exports and conserving tonnage, foodstuffs and raw materials, a radical revision and extension of the Government's foreign trade statistical classification has been undertaken by the Bureau of Foreign and Domestic Commerce, Department of Commerce. To this end the business public is urged to make immediate suggestions as to new classes of goods that ought to be shown in the trade statistics or new subdivisions of the present classes.

Although the present need for more specific statistics is largely brought about by the war, the bureau desires to make the statistics of the largest possible permanent value in its work of promoting foreign commerce after the war. The more extended use of statistics for commercial instead of purely legislative purposes was the moving factor in transferring the work of collecting and publishing foreign trade statistics to the Department of Commerce years ago, and since the Bureau of Foreign and Domestic Commerce has been in charge of the work an extensive educational campaign has been carried on to induce business men to study the statistics in planning extension of foreign markets. The classification has been amplified from time to time to meet the increasing needs of commercial interests for this purpose.

The Tariff Commission, the Food Administration, the War Trade Board, the Shipping Board and other war organizations are co-operating with the bureau in the effort to obtain a more detailed classification and will take measures to insure compliance with the official regulations.

In making suggestions for the export classification the business man should bear in mind that the statistics are based on the description of merchandise as shown in export declarations filed by the shipper with the Collector of Customs at the port of clearance. A too detailed classification going beyond commonly used commercial terms must, therefore, be avoided. Likewise suggestions regarding imports should be made with due regard to the fact that statistics of imports follow the tariff classification and that subdivisions for statistical purposes beyond customs requirements are difficult to obtain and are apt to result in inaccurate and misleading figures.

* * * *

AUSTRALIANS BUY AMERICAN ELECTRICAL GOODS

AMERICAN electrical goods, always well liked in Australia, have been in much greater demand there since the war started than ever before, according to a report published today by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

No such extensive use is made of electricity as in the United States, in spite of the fact that Australia has no real poverty and a large percentage of people who can afford to live well, but continuous propaganda and educational work will do wonders in the end. At present, Australians do not have the same desire to take up the semi-luxuries in electric appliances that Americans of sufficient means will not do without.

General conditions and methods of conducting business in Australia are described by the Author, Commercial Agent R. A. Lundquist, who, however, devotes most of his space to detailed descriptions of the markets for particular lines of electrical goods, such as power-generating equipment, electric railway equipment, lamps and domestic appliances.

The report is entitled "Electrical Goods in Australia," Special Agents' Series No. 155, and is sold for 15 cents by the Superintendent of Documents, Government Printing Offices, Washington, D. C., and by all the district and co-operative offices of the Bureau of Foreign and Domestic Commerce.

Coming Conventions

Electrical Contractors' Association of Georgia. Annual meeting, Tybee Island, Ga., June, 1918. Secretary, Dan Carey, 614 Chamber of Commerce Building, Atlanta, Ga.

American Society of Mechanical Engineers. Spring meeting, Worcester, Mass, June 4-7. Secretary, Calvin W. Rice, 29 West 39th Street, New York City.

National Electric Light Association. Annual convention, Hotel Traymore, Atlantic City, N. J., June 13 and 14. Secretary, T. C. Martin, 33 W. 39th Street, New York City.

Texas State Association of Electrical Contractors. Annual meeting, Galveston, Tex., June 15, 1918. Secretary, H. S. Ashley, Fort Worth, Tex.

Southeastern Section, National Electric Light Association. Annual meeting, June 19-20, 1918, Atlanta, Ga. Secretary-Treasurer, T. W. Peters, Columbus, Ga.

American Institute of Chemical Engineers. Summer meeting, Berlin, N. H., June 19-22. Headquarters, Mt. Madison House, Gorham, N. H. Secretary, John C. Olsen, Brooklyn, N. Y.

American Institute of Electrical Engineers. Annual convention, Atlantic City, N. J., June 26-28. Secretary, F. L. Hutchinson, 33 West 39th Street, New York City.

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CLASSIFICATION	No. on File	Age	Qualifications	Experience	Salary Wanted	Location
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Bookkeepers	2	26–35	High School	5–14 yrs.	$65–100	Anywhere.
Central Station Engineers	3	29–38	H. S.-Univ.	6–18 yrs.	$60–200	Anywhere.
Clerical	3	22–24	High School	2–10 yrs.	$75–125	Anywhere.
Commercial Laboratory Workers	1	29	Tech. School	11 yrs.	.....	Anywhere.
Construction Engineers	4	30–46	H. S.-Univ.	2–27 yrs.	$100–200	Anywhere.
Draftsmen	1	30	Tech. School	5 yrs.	$175	Anywhere.
Electricians	1	30	H. S.-Univ.	3 yrs.	$100	Anywhere.
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Engineers	5	28–40	Practical-Univ.	5–12 yrs.	$120–160	Anywhere.
Estimators	3	28–36	Practical	9–18 yrs.	$125–160	Anywhere.
Foremen	2	27–34	Practical	9–16 yrs.	$125–160	Anywhere.
General Managers	2	31–33	Practical	7–15 yrs.	$250–417	Anywhere.
Linemen	1	22	High School	5 yrs.	$90	Anywhere.
Managers, Commercial Department	1	34	Practical	12 yrs.	$200	Anywhere.
Managers, Contracting	2	26–36	College	5–16 yrs.	$125	Anywhere.
Managers, Jobbing House	2	32	College	13 yrs.	$2,400-10,000	Anywhere.
Managers, Office	3	26–32	High School	8–10 yrs.	$100–250	Anywhere.
Managers, Plant	11	30–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere.
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Manufacturers Representatives	4	36–38	Practical-Tech.	8–10 yrs.	Com.–$200	Anywhere.
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Telephone Engineers	1	35	H. S.-Tech.	15 yrs.	$200	Anywhere.
Welder (Acetylene)	1	33	High School	5 yrs.	$150	Anywhere.
Wiremen	2	23–25	High School	7–9 yrs.	$75–125	Anywhere.

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250. Office Manager. Minnesota electrical supply house is looking for man with some executive ability.

251. Superintendent
252. Estimator } Large Ohio electrical supply house is looking for steady, reliable men, preferably with family, to settle down in good, paying positions.

253. Salesmen. Several men wanted by New York City electrical supply house, to cover New York State.

254. Maintenance Man. Opening in Oklahoma small town for man with practical experience in all electrical work connected with small plant. Immediate acceptance required.

255. Branch Store Manager. Man wanted in Kansas town to take entire charge of electrical contracting and fixture business; good salary and chance for promotion

256. Sales Engineers. Three openings with Ohio branch of large eastern electrical apparatus manufacturer. Work requires application and sale of motor, generators, turbo-generators, etc., to industrial plants.

257. Advertising Manager. St. Louis electrical apparatus manufacturer wants man familiar with such matters, experienced not only in arranging copy, carrying on correspondence with publishers, but also with some experience in illustrating.

258. Manager. Competent general executive wanted by Michigan Municipal lighting plant of 2000 K. W. capacity, to take charge of power house work, outside line construction, and sales department. A good man rather than a cheap one is the object.

259. Superintendent. Philadelphia electrical apparatus manufacturer has need of man familiar with die work, machine work, and assembling of small electrical material.

260. Foremen
Wiremen
Electrical Engineers
Construction Engineers } Ohio electrical supplies manufacturing concern can use men in all these branches of the business. Early application requested.

261. Estimator—Solicitor. Combination man wanted by New Jersey contracting concern. Must have had practical experience in figuring jobs, closing business, and selling motors. Salary $30 to $50 per week.

262. Salesmen. Kentucky electrical supply house can place man in southern territory.

263. Salesmen. New York manufacturer wants man to cover New York City and vicinity; not subject to draft, and one who has had experience in selling electrical lines; salary $1200 to $1800.

264. Estimating Engineer. Opening with Iowa contracting concern.

265. Salesman. New Jersey territory open for capable man; headquarters at Newark; electrical supply line; good salary.

266. Assistant Purchasing Agent. Large electrical specialty manufacturer will pay $80 to $125 for man familiar with materials used in electrical apparatus.

267. Central Station Engineer. Oklahoma interurban railway will pay $100 per month for assistant to chief engineer.

268. Salesman. Cincinnati electrical supply house wants men familiar with adjacent territory.

269. Order Clerk. St. Paul house wants young man familiar with electrical supply line.

270. Office Executive. Attractive opening to take charge of Milwaukee office organization. Salary determined by experience and fitness.

271. Salesman. Man wanted for Greater New York.

272. Sales Engineer. Western office of large eastern manufacturer is looking for the right man, with both "pep" and experience.

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274. Draftsmen
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276. Salesman. Cincinnati opening with large electrical supply house.

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BISCHOFF, W. E., Po. 3190, care W. N. Matthews & Bro.....Chicago, Ill.
CARPENTER, JOHN, Po. 1320, care Corsicana Gas & Electric Co.....Corsicana, Tex.
CHASE, SAMUEL A., Po. 4424, care Westinghouse Electric & Manufacturing Co.....East Pittsburgh, Pa.
CRONINGER, C. R., Po. 9624-60V, care General Electric Co.....St. Louis, Mo.
DALY, DAVID, Po. 366-V, care Houston Electric Co.....Houston, Tex.
DOWNS, B. M., Po. 2508, care Hemingray Glass Co.....Covington, Ky.
ELKAS, I., Po. 9931, care Robbins & Myers.....St Louis, Mo.
GUARDIA, A. A., Po. 2657, 4447 Magnolia Ave.....Chicago, Ill.
HAND, WILLIAM, Po. 796, care General Electric Co.....Kansas City, Mo.
HAWKINES, R. V., Po. 11619, care Appleton Electric Company.....St. Louis, Mo.
HEAD, W. B., Po. 139-108, care Texas Power & Light Co.....Dallas, Tex.
HERSTEIN, W. R., Po. 765V, care Electric Supply Co.....Memphis, Tenn.
HICKOX, NORMAN B., Po. 7881, care National X-Ray Reflector Co., 235 West Jackson Blvd.....Chicago, Ill.
HILL, G. W., Po. 1271, 29 West Thirty-Ninth St.....New York, N. Y.
HOLCOMBE, W. P., Po. 901V, care Builders Exchange.....Minneapolis, Minn.
JENNINGS, O. A., Po. 226, care Southwest General Electric Co.....Dallas, Tex.
LAUDERBACH, F. E., Po. 11655, 917 Pine St.....St. Louis, Mo.
LEWIS, P. LLOYD, Po. 6018V, care Wagoner Electric Company....Kansas City, Mo.
MARTIN, CHARLES L., Po. 176-56V, care Electric Specialty Co.....Dallas, Tex.
RAMIER, J. F., Po. 10604, care Memphis Cons. Gas & Electric Co..Memphis, Tenn.
SERVA, A. A., Po. 425, 2420 Hoagland Ave.....Ft. Wayne, Ind
TUTTLE W. B., Pc. 1031, care San Antonio Traction Co.....San Antonio, Tex.
VOGAN, W. G., Po. 15974, care Northern Electric Co.....Winnipeg, Man.
VOGEL, J. C., Po. 2254-32V, Fifty-Ninth and Woodland Ave.....Philadelphia, Pa
WADDINGTON, E. H., Po. 5176, care Western Electric Co.....St. Louis, Mo.
WAKEMAN, J. M., Po. 524, 29 West Thirth-Ninth St.....New York, N. Y.

JOVIAN STATESMEN

ALABAMA
MATTHEWS, H. W., Po. 4476, care Burgoon-Matthews Electric Co.....Birmingham

ARIZONA, CALIFORNIA, NEVADA
SPERRY, LEWIS E., Po. 9415, care New York Insulated Wire Co.....San Francisco

ARKANSAS
GRIFFITH, C. J., Po. 13901, care Little Rock Railway & Electric Co...Little Rock

CONNECTICUT
HOLMES, T. L., Po. 3046, care Western Electric Co.....West Haven

GEORGIA
COLLIER, RAWSON, Po. 4458, care Georgia Railway & Power Co.....Atlanta

IDAHO
KIERSTED, EARNEST C., Po. 10258, care Idaho Power Co.....Twin Falls

ILLINOIS
SPAKE, L. C., Po. 15397V, care Western Editor McGraw-Hill Publishing Co..Chicago

INDIANA
LEE, WALLACE O., Po. 11440, care Indianapolis Light, Heat & Power Co.Indianapolis

KENTUCKY
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville

LOUISIANA
PORTEOUS, W. A., Po. 9226, care Western Union Telegraph Co.....New Orleans

MASSACHUSETTS
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston

MICHIGAN
CAVANAUGH, J. A., Po. 11199, care Benton Harbor & St. Joe Ry. Co..Benton Harbor

MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA
VILETT, W. H., Po. 3675V, care Sterling Electric Co.....Minneapolis

MISSOURI
JOHNSON, FRED, Po. 177V, care Wagner Electric Manufacturing Co...St. Louis

NEBRASKA
ZIMMAN, I. B., Po. 1411, care Omaha Electric Light & Power Co.....Omaha

NEW HAMPSHIRE
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston Mass.

NEW JERSEY, DELAWARE
HOWLETT, C. A. S., Po. 279.....Elizabeth

NEW MEXICO
SHEPARD, J. A., Po. 16106, care Deming Ice & Electric Co.....Deming

NEW YORK
HINES, E. G., Po. 16222, care Electrical World, 239 West Thirty-Ninth St.New York

OHIO
P. B. ZIMMERMAN, Po. 7305V, care National Electric Lamp Association, Nela Park.....Cleveland

OKLAHOMA
MCCALLUM, CHARLES, Po. 3394, care Western Electric Co.....Oklahoma City

PENNSYLVANIA
CRISS, GEO. H., Po. 3364.....Pittsburgh

RHODE ISLAND
DAVENPORT, E. R., Po. 8019, care Naragansett Electric Light Co.....Providence

SOUTH CAROLINA
FULLER, W. W., Po. 16462, care Isle of Palms Traction Co.....Charleston

TENNESSEE
WATSON, C. J. R., Po. 2131V, care Electric Supply Co.....Memphis

TEXAS
CLARK, HIRAM O., Po. 6629, care Houston Lighting & Power Co.....Houston

UTAH
TALMADGE, CHARLES H., Po. 1431, care Western Electric Co.....Salt Lake City

VERMONT
LARRABEE, E. E., Po. 1145, care Twin States Gas & Electric Co.....Bennington

VIRGINIA
SEILER, GUY E., Po. 7479, care Virginia Railway & Power Co.....Richmond

WEST VIRGINIA
POWERS, W. R., Po. 2784, care Consolidated Heat, Light & Power Co...Huntington

WISCONSIN
GOLIN, CARL, Po. 12385V, care Northwestern Storage Battery Co.....Milwaukee

PROVINCE OF ALBERTA
RICHARDS, NORMAN S., Po. 8985, care Northern Electric Co.....Calgary

PROVINCE OF MANITOBA
SCHUMACHER, J. H., Po. 1742, care Schumacher-Gray Co., Ltd.....Winnipeg

PROVINCE OF QUEBEC
HYDE, E. N., Po. 1614, care Northern Electric & Manufacturing Co...Montreal

FIRST AND SECOND TRIBUNES

ALABAMA
MATTHEWS, H. W., Po. 4476, First Tribune, care Burgoon-Matthews Electric Co.....Birmingham

ARIZONA
*HOWLAND, JOHN, Po. 18686, First Tribune, care Globe Light & Power Co....Globe

ARKANSAS
RUSH, J. C., Po. 1556V, First Tribune, care Rush Bros.....Hot Springs
(*Nicholas Lund, Po. 17257, Second Tribune)

CALIFORNIA
*FAGG, J. H., Po. 12212, First Tribune, care Pacific Gas & Electric Co....Stockton
(*A. F. Flanagan, Po. 12213, Second Tribune.)
GOULD, T. A., Po. 18057, First Tribune, care Redondo Home Telephone Co.....Redondo Beach
*LANDIS, H. G., Po. 288, First Tribune, care Landis Electric Co., 941 8th St., San Diego
(*H. B. Steventon, Po. 14643, Second Tribune)
(R. C. Cavell, Po. 14627, Second Tribune)
(Henry Mellman, Po. 9392, Second Tribune).....Oakland
*NIGHTINGALE, E. L., Po. 18072, First Tribune, care General Electric Co., 724 Spring St.....Los Angeles
(F. J. Airey, Po. 1266, Second Tribune)
*ROWE, A. E., Po. 995, First Tribune, care Telephone Electric Co.....San Francisco
(Edwin R. Brown, Po. 7715, Second Tribune)
*TOBEY, J. O., Po. 12226, First Tribune, care Pacific Gas & Electric Co.....Sacramento
(*H. F. Schultz, Po. 14914, Second Tribune)

COLORADO
*BURNITE, T. B., Po. 3426V, First Tribune, Boston Bldg.....Denver
(*H. S. Sands, Po. 1708, Second Tribune)
PAUL, CLARENCE M., Po. 4942, First Tribune, care Trinidad Gas & Electric Supply Co.....Trinidad

CONNECTICUT
*LOUWIEN, H. A., Po. 19696, First Tribune, care Danbury & Bethel Gas & E. I. Co.....Danbury

DELAWARE
*SHELTON, H. E., Po. 14400, First Tribune, care Wilmington & Philadelphia Traction Co.....Wilmington

DISTRICT OF COLUMBIA
*CARROLL, H. R., Po. 1794, First Tribune, 714 Twelfth St.....Washington

GEORGIA
(Geo. E. Watts, Po. 12482, Second Tribune).....Atlanta

IDAHO
DOVERY, C. G., Po. 10241, First Tribune, care Idaho Power Co.....Twin Falls
(J. O. Blackstone, Po. 15318, Second Tribune)

ILLINOIS
BAUM, B. E., Po. 19260, First Tribune, care Vermillion County Telephone Co.....Danville
BROWN, EDWIN C., Po. 5278, First Tribune, care Galva Electric Light Co...Galva
(Chas. E. Broderick, Po. 1154, Second Tribune).....East St. Louis
GREEN, WM. A., Po. 13279, care Green Electric Co., 315 South Jefferson St...Peoria
(Jas. R. Downs, Po. 13277, Second Tribune)
KETTRON, C. W., Po. 16416, First Tribune, President, Illinois Elect. Porc. Co.....Macomb
(James R. Massey, Po. 8939, Second Tribune).....Springfield
MORSE, CHESTER A., Po. 14611, First Tribune, care Central Public Illinois Service Co.....Mattoon
(Donald R. Truax, Po. 14617, Second Tribune)
*NELSON, A. L., Po. 15384, First Tribune, care Commonwealth Edison Co..Chicago
(*W. H. Colman, Po. 3040V, Second Tribune.)

INDIANA
HARRIS, A. B., Po. 14154, First Tribune, 570 Washington St.....Gary
*LOUTH, M. E., Po. 16419, First Tribune, care Globe Stove & Range Co...Kokomo
*VICTOR, H. R., Po. 4857, First Tribune, care Varney Electrical Supply Co., 235 South Meridian St.....Indianapolis

IOWA
*ABELL, C. S., Po. 3952V, First Tribune, 419 Main St.....Keokuk
FLACK, FRANK W., Po. 13979, First Tribune, care Iowa Ry. & Light Co..Coon Rapids
MCINNERNEY, B., Po. 1400, First Tribune, care Kimball Bros. & Co..Council Bluffs
(E. S. Damon, Po. 1398, Second Tribune)
MURPHY, J. E., Po. 15800, First Tribune, care Murphy-Dunham Co..Sioux City

KANSAS
*CARR, J. E., Po. 16506, First Tribune, 446 S. 7th St.....Salina
(M. L. Derge, Po. 9616, Second Tribune)
HUBBARD, HARVEY B., Po. 17623, First Tribune, care Hubbard Electric Co..Beloit
*MAGRUDER, H. W., Po. 15816, First Tribune, care Liberal Light, Ice & Power Co.....Liberal
*WADSWORTH, W. A., Po. 7249, First Tribune, care Kansas Gas & Electric Company.....Wichita
*WRIGHT, E. A., Po. 15827, First Tribune, care Great Bend Water & Electric Co.....Great Bend

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KENTUCKY

ADAMS, F. C., Po. 18315, First Tribune, proprietor, Adams Electric Co...Sulphur
BERRY, D. EARLE, Po. 8245, First Tribune, care Ruby House.....Owensboro
(C. C. Childers, Po. 15494, Second Tribune).....Louisville

LOUISIANA

JOUBERT, W. C., Po. 16467, First Tribune, 409 Main St.....Baton Rouge
*LEVY, FERDINAND, Po. 6696, First Tribune, care Interstate Electric Co., New Orleans
*(T. N. Lide, Po. 3925, Second Tribune)
McCONNELL, JOHN J., Po. 17031, First Tribune, care Rayville Light Plant..Rayville
*SWANN, L. A., Po. 2730-100, First Tribune, care Lake Charles Railway & Light Company.....Lake Charles
(*J. A. Landry, Po. 127, Second Tribune.)
WILLIAMS, J. A., Po. 5053, First Tribune, care Southwest Gas & Electric Co.....Shreveport
(H. E. Cahn, Po. 13025, Second Tribune)

MARYLAND

(Stanley B. Prather, Po. 1650, Second Tribune).....Baltimore

MASSACHUSETTS

(Kurt R. Sternberg, Po. 7612, Second Tribune).....Springfield

MICHIGAN

*AVIS, C. J., Po. 10086, First Tribune, care Southern Michigan Light & Power Co.....Morenci
*BURCHARD, C. A., Po. 19049, First Tribune, care B. H. & St. Joe Ry. & Light Co.....Benton Harbor
(*Earl Frakes, Po. 15528, Second Tribune)
*CUDAHY, J. D., Po. 16321, First Tribune, care Consumers Power Co....Kalamazoo
(*L. W. Brown, Po. 16319, Second Tribune.)
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St.....Traverse City
McCLOY, A. S., Po. 11051, First Tribune, care Stevenson Hotel.....Detroit
(J. T. Pearson, Po. 11210, Second Tribune)
*MARBLE, CHARLES M., Po. 13961, First Tribune, 67 College St.....Battle Creek
(*L. R. Greusel, Po. 10918, Second Tribune)
SCHAGANE, P. F., Po. 13871, First Tribune, 617 South Saginaw St.....Flint
(L. G. Copeman, Po. 7219, Second Tribune)
*THORNE, JOHN J., Po. 14749, First Tribune, care Throne Electric Co.....Bay City
(*Samuel Ball, Po. 19542, Second Tribune.)
*TROMBLEY, GEORGE, Po. 14750, First Tribune, care Trombley Electric Co., 130 N. Jefferson St.....Saginaw
(*A. B. Brow, Po. 14737, Second Tribune, 228 South Weadock Ave).....Saginaw
WATSON, GEO. H., Po. 12848, First Tribune, care Consumers Power Co., 124 Monroe St.....Grand Rapids
(R. H. Vandermass, Po. 16484, Second Tribune)

MINNESOTA

*ANDERSON, EMIL, Po. 7805, First Tribune, 239 Plymouth Building....Minneapolis
(*Paul Joyslin, Po. 1254, Second Tribune.)
*GRIMES, W. A., Po. 761, First Tribune, care Northern Electric Co.....Duluth
(*F. A. Johnson, Po. 8192, Second Tribune)

MISSISSIPPI

*BRANDLI, H. E., Po. 15617, First Tribune, care Meridian Light & Power Co.Meridian
(*Chas. M. Rogers, Po. 14485, Second Tribune)
GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co.....Gulfport
*McANGE, W. N., Po. 16854, First Tribune, care Southern Telephone & Telegraph Co., Telephone Building.....Corinth
NEWBILL, HOMER J., Po. 16855, First Tribune, Box 413.....Tupelo

MISSOURI

*BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co.....Marshall
(G. E. Michel, Po. 9061, Second Tribune).....St. Louis
FOX, CHAS. D., Po. 18163V, First Tribune, care City Light Plant.....St. Joseph
(S. W. Beale, Po. 6840, Second Tribune)
(*A. D. Barber, Po. 1850, Second Tribune.)
(A. M. Grall, Po. 4112, Second Tribune).....Joplin
*NIENHAUS, J. V., Po. 19219, First Tribune, care Perry County Public Utilities Co.....Perryville
*WALKER, A. H., Po. 17669, First Tribune, care Walker-O'Byrne Electric Co.....Springfield

NEBRASKA

BURLEY, W. B., Po. 10291, First Tribune, 318½ West Koenig St.....Grand Island
(J. D. Whitmore, Po. 1409, Second Tribune)

NEW JERSEY

ALEXANDER, JOHN P., Po. 11892, First Tribune, Broad St. Bank Bldg....Trenton
COX, W. A., Po. 18960, First Tribune, care Public Service Electric Co...Newark
FEY, W. E., Po. 10120, First Tribune, care Diehl Manufacturing Co..Elizabeth
*PURINTON, A. J., Po. 9643V, First Tribune, care Atlantic City & Shore Ry. Co.....Atlantic City
(*Wm. Bach, Po. 14191, Second Tribune)
STORTZ, H. W., Po. 16450, First Tribune, care Edison Storage Battery Co..Orange
(J. B. Renwick, Po. 16445, Second Tribune)

NEW MEXICO

*HICKS, A. C., Po. 17978, First Tribune, care Albuquerque Gas & Electric Co.....Albuquerque
*ROBERTS, E. A., Po. 17980, First Tribune, care Public Utilities Co.....Carlsbad
SMITH, JAMES R., Po. 16107, First Tribune, care Raton Electric Light & Power Co.....Raton

NEW YORK

C. C. MacKenzie, Po. 2029, Second Tribune).....Syracuse
BURNS, JOHN H., Po. 870, First Tribune, care McCarthy Bros. & Ford, 41 Eagle St.....Buffalo
(L. F. Philo, Po. 774, Second Tribune)
*PELZ, GEO. V. W., Po. 18674, First Tribune, care New York Telephone Co., 109 West 125th St.....New York
*(W. J. Moore, Po. 3136, Second Tribune).....New York
*RUSSELL, R. E., Po. 5561, First Tribune, care General Electric Co....Schenectady

NORTH CAROLINA

JONES, WM. T., Po. 5685, First Tribune, P. O. Box 405.....Fayetteville
SPEAKE, CHAS. L., Po. 16993, First Tribune, care Westinghouse Electric & Manufacturing Co.....Charlotte
*SPENCER, G. L., Po. 11366, First Tribune, 713 Chestnut St.....Greensboro
(*R. H. Milton, Po. 11371, Second Tribune)

OHIO

*ALLIS, CLARENCE L., Po. 13203, First Tribune, care Wooster Electric Company.....Wooster
BRAUN, W. A., Po. 14652, First Tribune, care Braun Electric Manufacturing Co.....Dover
*BULKELEY, W. V. C., Po. 17998, First Tribune, care Columbus Railway, Power & Light Co.....Columbus
*COCHRAN, J. E., Po. 15898, First Tribune, care Ohio Electric Co.....Lima
*COONEY, JAS. J., Po. 13184, First Tribune, care Toledo Railway & Light Co.Toledo
(*Alonzo W. Roush, Po. 12410, Second Tribune)
CRAIN, CHARLES E., Po. 6946, First Tribune, care Crain-Stuart Co.....Springfield
(Fred J. Green, Po. 6951, Second Tribune)
*DUNNING, R. S., Po. 16471, First Tribune, care Forest City Rubber Co., Cleveland
*FENTON, E. BURT, Po. 18446, First Tribune, care Northern Ohio Traction & Light Co.....Akron
(F. B. Steele, Po. 13451, Second Tribune)
*FOX, HORACE C., Po. 16361, First Tribune, care Massillon Gas & Electric Company.....Massillon
HENCH, L. W., Po. 7854, First Tribune, care Westinghouse Electric & Manufacturing Co.....Youngstown
(E. A. Sanders, Po. 9666, Second Tribune)
HURD, WILLIAM P., Po. 9798, First Tribune, care Northwestern Ohio Light Company.....Van Wert
(*Samuel E. Ringgold, Po. 10995, Second Tribune.)
LOEWE, P. M., Po. 3942, First Tribune, care Oberlin Gas & Electric Co..Oberlin
MILLER, E. G., Po. 13108, First Tribune, care Warren & Niles Telephone Co..Warren
(Marshall, W. J., Po. 10001, Second Tribune.)
PARKER, HERBERT L., Po. 905, First Tribune, care Conneaut Metal Works Co.....Conneaut
*ROHRBAUGH, C. L., Po. 18450, First Tribune, 1211 Carr St.....Sandusky
(*R. C. Beebe, Po. 18442, Second Tribune.)
(J. D. Witner, Po. 14412, Second Tribune)
SIMS, E. A., Po. 5968V, First Tribune, care Avery-Loeb Electric Co.....Newark
(F. C. Morrison, Po. 18630, Second Tribune)
SMITH, E. B., Po. 10596, First Tribune, care Coshocton Gas Co.....Coshocton
*SNYDER, ED., Po. 19753, First Tribune, care Ohio Brass Company.....Mansfield
(*H. S. Robeson, Po. 13200, Second Tribune).
*VAN WINKLE, FRANK D., Po. 12966, First Tribune, care Post Glover Co..Cincinnati
(*L. E. Trotter, Po. 3510, Second Tribune.)

OKLAHOMA

*CORKEN, O. K., Po. 19827, First Tribune, 213 W. First St.....Oklahoma City
(*A. L. Mullengren, Po. 18853, Second Tribune.)
HOWELL, EDWARD, Po. 7896, First Tribune, care Abernathy & Howell, Elks Building.....Shawnee
*RENTCHLER, C. E., Po. 6870, First Tribune, care Enid Electric & Gas Company..Enid
(*Lincoln Beerbower, Po. 1475, Second Tribune.)
*STRASSWEG, FRED A., Po. 19821, First Tribune, care Muskogee Gas & Electric Co.....Muskogee
(*Edgar M. Graham, Po. 19811, Second Tribune)
*WALKER, P. G., Po. 6871, First Tribune, care Tulsa Corporation.....Tulsa
(James M. Kinslow, Po. 16770, Second Tribune.)

PENNSYLVANIA

*FADER, W. L., Po. 2883, First Tribune, care Union Electric Co.....Pittsburgh
(*D. Paul Lockard, Po. 5788, Second Tribune.)
FERREE, L. L., Po. 18865, First Tribune, 1830 Regina St.....Harrisburg
KRISE, W. M., Po. 4823, First Tribune, Manager, Jefferson Electric Co. Punxsutawney
LODGE, JOS., Po. 18869, First Tribune, 157 East Chestnut St.....Lancaster
MURPHY, WALTER R., Po. 14021, First Tribune, care Meadville Telephone Co.....Meadville
(Carl W. Wilks, Po. 10848, Second Tribune)
(W. T. Snyder, Po. 5128, Second Tribune).....McKeesport
REGER, THOMAS E., Po. 4637, First Tribune, 224 Seventh Ave.....Altoona
*ROUNDS, L. B., Po. 14528, First Tribune, care New Castle Electric Co., 19 Washington St.....New Castle
(*J. C. Chestnut, Po. 14873, Second Tribune)

SOUTH CAROLINA

DOUGLAS, JAS. A., Po. 16984, First Tribune, care Municipal Electric Plant Lake City
(T. A. Brookbanks, Po. 16460, Second Tribune).....Charleston

TENNESSEE

ALLEN, TERRY E., Po., 18838, First Tribune P. O. Box 185.....Jackson
*JONES, GRAYSON, Po. 13782, First Tribune, care Electric Equipment Co., 131 Eighth Ave., North.....Nashville
RUTLEDGE, C. B., Po. 2127, First Tribune, care Bluff City Electric Co...Memphis
(B. F. Myers, Po. 12911, Second Tribune)

TEXAS

*IRVINE, R. J., Po. 6251, First Tribune, care San Angelo Water Light & Power Co.....San Angelo
*COOPER, H. S., Po. 365, First Tribune, care Southwest Gas & Electric Co., 405 Slaughter Building.....Dallas
COPLEY, E. F., Po. 7073, First Tribune, care Central Electric Co.....Waco
(L. B. Gardner, Po. 11390, Second Tribune)
*FROST, F. G., Po. 4015V, First Tribune, care Houston Lt. & Pr. Co.....Houston
*KELSEY, L. M., Po. 11350, First Tribune, care S. W. Tel. & Tel. Co....Galveston
(*WOOTEN, J. H., Po. 20357, Second Tribune)
LARABEE, R. W., Po. 1327, First Tribune, care Southwestern Electric & Machine Co.....El Paso
*MILLER, THOS. L., Po. 8766, First Tribune, 219 Poplar St.....Abilene
MONTGOMERY, JOHN G., Po. 11355, First Tribune.....La Marque
MUNROE, WALTER N., Po. 3085, First Tribune, care Texas Power & Light Co.....Paris
REID, BRUCE, Po. 18290, First Tribune, care Gulf Refining Co.....Port Arthur
(Edward T. Keck, Po. 18284, Second Tribune)
*SCOVILL, F. E., Po. 17, First Tribune, care San Antonio Builders Exch..San Antonio
(*C. G. Matthews, Po. 10662, Second Tribune)

SMITH, GEO. B., Po. 6649, First Tribune, 309 Guadalupe St.....San Marcos — Central Texas League — Lockhart, Luling, Seguin, New Braunfels, San Marcos

VIRGINIA

*LANCASTER, WM., Po. 6594, First Tribune, care Western Electric Co.....Richmond
(Peter Winston, Po. 1546, Second Tribune)
*MACLEARY, H. M., Po. 9725, First Tribune, 707 Washington St.....Suffolk
(*J. E. B. Holliday, Po. 17106, Second Tribune)
*PATRICK, W. A., Po. 19859, First Tribune, care Dupont-DeNemours & Co. Hopewell
(*G. C. Hurst, Po. 8931, Second Tribune)
WOODHOUSE, H. C., Po. 6618, First Tribune, 54 Bank St.....Norfolk

WASHINGTON

(H. B. Pierce, Po. 7235, Second Tribune).....Spokane

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WEST VIRGINIA

COSTINE, THOS. E., Po. 7699, First Tribune, 1059 McColloch St.....Wheeling
(R. R. Fagin, Po. 9161, Second Tribune)
*WALKER, C. D., Po. 18092, First Tribune, care C. & W. Electric Co.....Huntington

WISCONSIN

*BRIGGS, WILFRED, Po. 12382, First Tribune, 18 Portland St.....Fond du Lac
(*John Adams, Po. 12378, Second Tribune)
DEARTH, E. C., Po. 17144V, First Tribune, care Wisconsin & Minnesota Light & Power Co.....Eau Claire
(Holmes Ives, Po. 18253, Second Tribune)
*DUNHAM, A. W., Po. 7352, First Tribune, care Sun Ray Manufacturing Co..Oshkosh
*ENGSBERG, B. C., Po. 15985, First Tribune, care Light and Water Dept..Lake Mills
*PFEIFER, JOSEPH W., Po. 10981, First Tribune, care Henry Newgard & Company.....Milwaukee
(*W. R. Patton, Po. 1090, Second Tribune.)
LINKER, P. R., Po. 14302, First Tribune, care Wisconsin-Minnesota Light & Power Co.....La Crosse
(Dan. Whalen, Po. 16022, Second Tribune)
TESSIER, LEONARD, L., Po. 18823, care De Pere Electric Light & Power Co..De Pere
*SCHEURMANN, A. R., Po. 17653, First Tribune, 8 Main St.....Watertown
(*Walter O. Wickler, Po. 20000, Second Tribune)

CANADA

ALBERTA

(David Conn, Po. 11885, Second Tribune).....Lethbridge

MANITOBA

*HENRY, J. S., Po. 5994, First Tribune, 152 Gary St.....Winnipeg
(*G. J. Brown, Po. 5977, Second Tribune)

ONTARIO

*BRADLEY, J. M., Po. 13203, First Tribune.....Iroquois Falls
(C. B. Deeks, Po. 17101, Second Tribune).....Coniston
COOKE, W. P., Po. 16714, First Tribune, P. O. Box 178.....Port Arthur

SASKATCHEWAN

SANGSTER, A. G., Po. 7496, First Tribune, 820 Fourteenth St., East...Saskatoon

SPAIN

EDDY, H. W., Po. 11105, First Tribune, care Riegos y Fuerza del Ebro S. A.
Apartado 491.....Barcelona

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Colorado Springs, Colo.—ACACIA	.....	.....
Columbia, S. C.—COLONIAL	.....	.....
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Eau Claire, Wis.—EAU CLAIRE	.....	.....
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Ft. Worth, Tex.—METROPOLITAN	.....	.....
Gary, Ind.—GARY	$1.00	$1.50
Grand Rapids, Mich.—LIVINGSTON	$1.00	.....
Harrisburg, Pa.—COLUMBUS	.....	.....
Houston, Tex.—BENDER	$1.50	$2.00
Hutchinson, Kan.—CHALMERS	.....	.....
Idaho Falls, Ida.—ELEANORE	$1.00	$2.00
Jackson, Miss.—ROYAL	.....	.....
Jacksonville, Fla.—MASON	.....	.....
Jacksonville, Ill.—PACIFIC	.....	.....
Kalispell, Mont.—KALISPELL	$1.00	.....
Kansas City, Mo.—COATES	$1.00	$1.50
Lethbridge, Alta.—ALEXANDRIA	$1.00	.....
Los Angeles, Cal.—CLARK; NEW ROSTLYN	$1.00	$1.50
Louisville, Ky.—GALT	.....	.....
Madison, Wis.—CAPITAL	$1.00	.....
Milwaukee, Wis.—CHARLOTTE	$1.00	.....
Mitchell, S. D.—NEW NAVIN	.....	.....
Montgomery, Ala.—EXCHANGE	.....	.....
Montreal, P. Q.—ST. LAWRENCE HALL; WINDSOR	.....	.....
Muskegon, Mich.—MUSKEGON	$1.00	$1.50
New Orleans, La.—DE SOTO	$1.00	.....
New York, N. Y.—BRESLIN	.....	.....
Niagara Falls, N. Y.—PROSPECT	.....	.....
Norfolk, Va.—SOUTHLAND	$1.00	$1.50
Oshkosh, Wis.—TREMONT	.....	.....
Peoria, Ill.—MECCA	$1.00	.....
Philadelphia, Pa.—NEW BINGHAM	$1.50	$2.50
Pittsfield, Mass.—WENDELL	$1.50	.....
Portland, Ore.—MULTNOMAH	$1.50	.....
	OREGON	$1.00	$2.00
Richmond, Va.—JEFFERSON	$1.50	$2.50
	RICHMOND	$1.50	$2.50
Roanoke, Va.—ROCKLEDGE	$1.00	.....
Rochester, N. Y.—POWERS	.....	$2.00
Rutland, Vt.—BERWICK	.....	.....
St. Joseph, Mo.—ST. FRANCIS	.....	.....
St. Louis, Mo.—AMERICAN	$1.50	.....
Salt Lake City, Utah—NEWHOUSE	.....	.....
San Angelo, Tex.—LANDON	.....	.....
San Diego, Cal.—SAN DIEGO	$1.00	.....
San Francisco, Cal.—ARGONAUT	$1.00	$2.00
	SUTTER	$1.50	.....
Santa Barbara, Cal.—POTTER	.....	.....
Schenectady, N. Y.—MOHAWK	$1.00	$2.00
Seattle, Wash.—SEATTLE	$1.00	$2.00
Sheridan, Wyo.—SHERIDAN	.....	.....
Shreveport, La.—YOUREE	.....	.....
Sioux City, Ia.—MARTIN	$1.00	$2.00
Spokane, Wash.—SPOKANE	.....	.....
Springfield, Mo.—COLONIAL	.....	.....
Tacoma, Wash.—OLYMPUS	.....	.....
Three Rivers, Mich.—THREE RIVERS	$2.00	.....
Tucson, Ariz.—HEIDEL	.....	.....
Vicksburg, Miss.—CARROLL	$1.00	.....
Waco, Tex.—NEW STATE	$1.00	$2.00
Watertown, S. D.—KAMPESKA	$1.00	.....
Watertown, Wis.—NEW COMMERCIAL	$1.00	$1.50
Winnipeg, Man.—ST. REGIS	$1.50	.....
Winona, Minn.—WINONA	.....	.....

LIST OF STENTORS

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FOURTH DISTRICT
ROBERT L. CUNNINGHAM, Po. 4749,
Care J. F. Buchanan & Company, Philadelphia

FIFTH DISTRICT
E. F. MEYERS, Po. 6170,
345 Federal Park Place, Fort Wayne, Indiana

THIRTEENTH DISTRICT
RICHARD F. BEHAN, Po. 9315,
Care Westinghouse Electric & Manufacturing Co., San Francisco, Cal.

SIXTH DISTRICT
GEORGE E. WATTS, Po. 12482
Care Electric Service Supplies Co., Atlanta, Ga.

CHARTERED JOVIAN LEAGUES

Cincinnati	Charter	No. 1
Kansas City, Mo.	"	No. 2
Pittsburgh	"	No. 3
Minneapolis	"	No. 4
St. Joseph, Mo.	"	No. 5
Louisville, Ky.	"	No. 6
Stark County Jovian League Comprising the towns of Massillon, Canton and Alliance, Ohio.	"	No. 7
Tulsa, Okla.	"	No. 8
Eau Claire, Wis.	"	No. 9
Harrisburg, Pa.	"	No. 10
Wichita, Kan.	"	No. 11
Winnipeg, Man.	"	No. 12
Bay City, Mich.	"	No. 13
Milwaukee, Wis.	"	No. 14
Port Arthur, and Fort William, Ont.	"	No. 15
Oklahoma City	"	No. 16
Galveston, Texas	"	No. 17
Muskogee, Okla.	"	No. 18
Mansfield, Ohio Comprising Richland and Ashland Counties	"	No. 19
St. Louis	"	No. 20
Southwestern Michigan Jovian League Benton Harbor, Michigan	"	No. 21
Watertown (Wis.) Jovian League	"	No. 22
Akron (Ohio) Jovian League	"	No. 23
Wilmington (Del.) Jovian League	"	No. 24
Dallas Jovian League	"	No. 25
Columbus Jovian League	"	No. 26
Denver Jovian League	"	No. 27
New York Jovian League	"	No. 28
New Orleans Jovian League	"	No. 29
Houston Jovian League	"	No. 30
Atlantic City Jovian League	"	No. 31
Globe Jovian League	"	No. 32
Trenton Jovian League	"	No. 33
San Antonio Jovian League	"	No. 34

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JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, V. W. Shear, Po. 14399, 609 Flatiron Building.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, R. J. Hadlow, Po. 15530, care Electric Service Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, Edmond D. McCarthy, Po. 589-10, 41 East Eagle Street.

CHATTANOOGA—Wednesday, 12:00 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge, 1900 Continental & Commercial Bank Building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, Joseph C. Bowman, Po. 6275, care H. W. Johns-Manville Company.

CLEVELAND—Regular meeting, Thursday, 12:00 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12:00 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Railway, Power & Light Company.

DALLAS—First and third Mondays, Hotel Adolphus, 12:15 p. m. Secretary, E. E. Roessler, Po. 12128, P. O. Box 1506.

DAYTON—First and third Mondays of each month, 12:00 m., Miami Hotel. Secretary. O. E Howland, Po. 17127, care Dayton Power & Light Company.

DENVER—Second and fourth Wednesdays, 12:15 P. M., Kenmark Hotel, Secretary, T. B. Bumite, Po. 3426V, 523 Boston Building.

DETROIT—Meetings Saturday, 12:30 p. m., Grill Room, Board of Trade. Secretary, R. J. Kirchner, Po. 5199, care General Electric Company.

EAU CLAIRE—First Monday each month. Secretary, E. C. Dearth, Po. 17144V, care Wis. & Minn. Light & Power Co.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna Street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur Hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Company.

GALVESTON—Meet on call. Secretary, F. G. Cassan, Po. 20343, 521 22nd St.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Company.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Company.

HOUSTON (TEX.) Date later. Rice Hotel, Sec'ry R. S. Daunoy Po. 20073, care Houston Lighting & Power Co.

INDIANAPOLIS—Monday, 12:15 p. m. Secretary, A. H. Smith, Po. 13580, care Ford Motor Car Company, 1315 East Washington Street.

KANSAS CITY—Third Friday each month, 12:15 p. m., Hotel Muehlebach. Secretary, T. R. Harber, Po. 18908, 1500 Grand Avenue.

LA CROSSE—First Thursday each month, Elks Club, 6:00 p. m. Secretary, Dan J. Whalen, Po. 16022, care Thill-Manning-Whalen Company.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Company.

LOS ANGELES—Wednesday, 12:00 m., Jahnke's Tavern, 534 South Spring Street. Secretary, Clifton Peters, Po. 12734, 108 Edison Building.

LOUISVILLE—Tuesday, 12:15 p. m., Hotel Henry Watterson. S. B. Storm, Po. 9781, care General Electric Company.

MANSFIELD—Date and place of meeting from Secretary, H. A. Waite, Po. 16625, care Federal Sign System.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel. Secretary, W. R. Murphy, Po. 14021, care Meadville Telephone Company.

MILWAUKEE—Second Tuesday each month, Hotel Plankington. Secretary, F. V. Ziekursch, Po. 16625, 436 Public Service Building.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second Avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

MUSKOGEE—Secretary, A. E. Farmer, Po. 19809, 544 N. 11th St.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Company.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne Street, New Orleans, La.

NEW YORK—Place and date of meeting from Secretary, F. M. Feiker, Po. 17197, care Electrical World, Tenth Avenue and Thirty-sixth Street.

OKLAHOMA CITY—Monday, 12:15 p. m., Lee Huckins Hotel. Secretary, A. L. Mullergren, Po. 18853, care Berham Engineering Company.

PEORIA—First and third Saturdays of each month, 1:00 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Company.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon Street.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, R. Gray Jones, Po. 16094, care Cutter-Hammer Co.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's Restaurant, Kellog Street. Secretary, J. O. Roser, Po. 10412, care General Electric Company.

RICHMOND—Third Wednesday of each month, Business Men's Club. Secretary, L. E. Walker, Po. 6610, care Western Electric Company.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Company.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto Avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Company.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Ridpath, Po. 7739, 505 Rialto Building.

SPOKANE—First and third Wednesdays of each month, 12:00 m., Davenport's Hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Company.

STARK COUNTY—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

ST. LOUIS—Tuesday, 12:15 p. m., American Annex Hotel. Secretary, Geo. McD. Johns, Po. 9052, Room 401, City Hall.

ST. JOSEPH, MO.—Secretary, W. R. Thomas, Po. 1489, care American Electric Company.

TULSA, OKLA.—Monday, 12:00 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G. Walker, Po. 6871, 18 West Third Street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Company.

WATERTOWN, WIS.—7:00 p. m., last Thursday each month, New Commercial Hotel. Secretary, H. J. Hippler, Po. 20007, care Wis. Gas & Electric Co.

WICHITA—First and third Mondays of each month, 12:00 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Company.

WINNIPEG—Every other Thursday, 12:15 p. m., Fort Garry Hotel. Secretary, C. T. Kummen, Po. 15957, 386 Donald Street.

* * * *

ENLISTING THE SNAKES, HAWKS AND OWLS

By JAMES H. COLLINS

A KANSAS farmer recently printed in the Abilene Register, that State, the following advertisement: "NOTICE—I have put a bull snake in my alfalfa field north of town to catch the gophers. Please do not bother him or shoot at him, as he is a good, well-behaved snake and harmless except to gophers and mice."

Whereupon Eastern newspapers clipped it as a piece of humor.

But there is a very definite food-saving idea here. All over the country we have harmless snakes, capable of rendering the utmost service provided they are left alone. But even country people find it difficult to let harmless snakes follow, unmolested, a snake's legitimate business.

There is a certain big black snake throughout the East common in fields and around farmhouses. He is not only harmless but whenever one sees him about the premises he is diligently at work catching mice or cleaning up refuse. But he looks deadly enough to the inexperienced eye, and, moreover, has an unfortunate curiosity. When he hears a horse coming down a field row hitched to a cultivator, guided by a boy, his natural desire to know what is coming leads him to raise a quarter of his length from the ground and take a look, and nine times in ten the boy stops the horse and virtuously slaughters Mr. Snake, thus killing a mouser capable of catching far more rodents than any tabby cat.

It is the same with hawks and owls. The owner of a flock of hens sees an enormous hawk sailing over the barnyard and brings it down with a rifle, believing that he has destroyed an enemy. But only two varieties of hawks in this country prey upon hens, and neither of them sails over the barnyard in that manner, for their line of attack is stealthy, through trees and brush.

Likewise with owls, which are most persistent destroyers of small animals harmful to crops and foodstuffs. There was a campaign of owl and hawk killing through the East some years ago which went far enough to upset the balance of nature locally and bring on a perfect plague of mice. When disease reduced the number of coyotes in the Northwest, some years ago, the farmers' joy at what they considered relief from a pest was soon turned into alarm, as a plague of jack rabbits and gophers followed, the chief food of the coyote.

In the conservation of food we need these helpers, not merely in war, but permanently, in the production and conservation of food.

If the snakes, owls and hawks were able to write and vote, they would probably undertake a "campaign of education" on their own behalf, for better public understanding, or seek protective laws in Congress. As man is the only writing and voting animal, it is clearly his duty to understand the snakes, owls and hawks. With understanding will come intelligent protection.

—The Weekly Bulletin.

* * * *

ATTENTION MANUFACTURERS

Experienced Electrical district sales manager and traveling representative is open for position with progressive manufacturing concern.

Thirty-five years old, twelve years experience selling jobbers and doing missionary work with dealers and architects. Has wide acquaintance as District Manager in Ohio, Indiana, W. Pennsylvania, Virginia, West Virginia, Alabama and Tennessee, in Central and Southern states. At present employed but desires change for good reasons. Address A1, care The Jovian, 1415 Syndicate Trust Building, St. Louis, Mo.

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Advertising That Hits the Bull's Eye

AS WE have frequently set forth, The JOVIAN covers the entire electrical industry. When we say entire, we mean every branch, in every section of the nation and in Canada. From an advertising standpoint a circulation of this kind possesses a distinct advantage.

One of the important reasons that make such a circulation valuable is the fact that it reduces the amount of waste to a minimum. It takes an advertisement concerning electrical products or material directly to the people who are interested in them, who use or distribute them.

In addition to that, The JOVIAN possesses a still greater value as an advertising medium. Besides circulating directly in the industry, its circulation is also among those who have the purchasing power of the electrical industry.

The tabulation of classified membership of the Jovian Order shows that there are included in The JOVIAN's circulation a large number of purchasing agents and department heads who either purchase material and products or who are influential in deciding the kind of material and products to be used or handled.

This tabulation also shows that there are included in its circulation many presidents and owners of electrical concerns.

The cross tabulations show that these purchasing agents and officials are connected with every kind of electrical activity, such as central stations, street railways, jobbers, distributing agents, contractors and retailers.

Whether a concern has a new article to introduce, or is seeking a medium of publicity for the purpose of increasing sales, The JOVIAN will be found invaluable.

The cost of space is moderate. No increase has been made in the rates because of the specialized strength of the circulation.

It will pay you to investigate.

Rates and particulars supplied on request.

Address:

COMMERCIAL DIVISION, JOVIAN ORDER
1415 Syndicate Trust Building
St. Louis, Missouri

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THE JOVIAN

Volume Twelve JUNE, 1918 Number Seven

The Duty of the Employer in the Reconstruction of the Crippled Soldier

By DOUGLAS C. McMURTRIE, Director

Red Cross Institute for Crippled and Disabled Men New York City

WE MUST count on the return from the front of thousands of crippled soldiers. We must plan to give them on their return the best possible chance for the future. Dependence cannot be placed on monetary compensation in the form of a pension, for in the past the pension system has proved a distinct failure in so far as constructive ends are involved. The pension has never been enough to support in decency the average disabled soldier, but it has been just large enough to act as an incentive to idleness and semi-dependence on relatives or friends.

The only compensation of real value for physical disability is rehabilitation for self-support. Make a man again capable of earning his own living and the chief burden of his handicap drops away. Occupation is, further, the only means for making him happy and contented.

Soon after the outbreak of hostilities the European countries began the establishment of vocational training schools for the rehabilitation of disabled soldiers. They had both the humanitarian aim of restoring crippled men to the greatest possible degree and the economic aim of sparing the community the burden of unproductivity on the part of thousands of its best citizens. The movement had its inception with Mayor Edouard Herriot of the city of Lyons, France, who found it difficult to reconcile the desperate need for labor in the factories and munition works while men who had lost an arm or a leg but were otherwise strong and well were idling their time in the public squares. He therefore induce the municipal council to open an industrial school for war cripple which has proved the example and inspiration for hundreds of similar schools since founded throughout France, Italy, Germany, Great Britain and Canada.

The disability of some crippled soldiers is no bar to returning to their former trade, but the injuries of many disqualify them from pursuing again their past occupation. The schools of training prepare these men for some work in which their physical handicap will not materially interfere with their production.

The education of the adult is made up largely of his working experience. The groundwork of training in his past occupation must under no circumstances be abandoned. The new trade must be related to the former one or be, perhaps, an extension or specialization of it. For example, a man who had done manual work in the building trades may by instruction in architectural drafting and the interpretation of plans be fitted for a foreman's job, in which the lack of an arm would not prove of serious handicap. A trainman who had lost a leg might wisely be prepared as a telegrapher, so that he could go back to railroad work, with the practice of which he is already familiar.

Whatever training is given must be thorough, for an adult cannot be sent out to employment on the same basis as a boy apprentice. He must be adequately prepared for the work he is to undertake.

The one-armed soldier is equipped with working appliances which have supplanted the old familiar artificial limb. The new appliances are designed with a practical aim only in view; they vary according to the trade in which the individual is to engage. For example, the appliance for a machinist would be quite different from that with which a wood turner would be provided. Some appliances have attached to the stump a chuck in which various tools or hooks can interchangeably be held. The wearer uses these devices only while at work; for evenings and holidays he is provided with a "dress arm" which is made in imitation of the lost natural member.

An important factor in the success of re-educational work is an early start, so that the disabled man shall have no chance to go out unemployed into the community. In even a short period of exposure to the sentimental sympathy of family and friends, his "will to work" is so broken down that it becomes difficult again to restore him to a stand of independence and ambition. For this reason therefore, the plan for his future is made at as early a date as his physical condition admits, and training is actually under way 'before the patient is out of the hospital.

In the readjustment of the crippled soldier to civilian life, his placement in employment is a matter of the greatest moment. In this field the employer has a very definite responsibility.

But the employer's duty is not entirely obvious. It is, on the contrary, almost diametrically opposite to what one might superficially infer it to be. The duty is not to "take care of" from patriotic motives, a given number of disabled men, finding for them any odd jobs which are available, and putting the ex-soldiers in them without much regard to whether they can earn the wages paid or not.

Yet this method is all too common. A local committee of employers will deliberate about as follows: "Here are a dozen crippled soldiers for whom we must find jobs. Jones, you have a large factory; you should be able to take care of six of them. Brown, can you not find places for four of them in your warehouse? And Smith, you ought to place at least a couple in your store."

Such a procedure cannot have other than pernicious results. In the first years of war the spirit of patriotism runs high, but experience has shown that men placed on this basis alone find themselves out of a job after the war has been over several years, or in fact, after it has been in progress for a considerable period of time.

A second weakness in this method is that a man who is patronized by giving him a charity job, comes to expect as a right such semi-gratuitous support. Such a situation breaks down rather than builds up character, and makes the man progressively a weaker rather than a stronger member of the community. We must not do our returned men such injury.

The third difficulty is that such a system does not take into account the man's future. Casual placement means employment either in a makeshift job as watchman or elevator operator such as we should certainly not offer our disabled men except as a last resort—or in a job beyond the man, one in which, on the cold-blooded considerations of product and wages, he cannot hold his own. Jobs of the first type have for the worker a future of monotony and discouragement. Jobs of the second type are frequently disastrous, for in them a man, instead of becoming steadily more competent and building up confidence in himself, stands still as

(Continued on page ten)

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

All matter for the news columns of The Jovian, and advertising copy, should reach the Central Offices not later than the first of each month

Advertising rates on application

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HOMER E. NIESZ, Po 306V
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THOS. A. WYNNE, Po. 11457V
Past Jupiter Fourteen, Indianapolis, Ind.

HENRY L. DOHERTY, Po. 3208-33
Past Jupiter Fifteen, New York City.

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"JOVIANISM 100% ANTI-KAISERISM"

ILLUSTRATIVE of the truly patriotic American spirit of its members The Jovian Order nationally and locally has, without specific organization for the purpose, taken a lively interest and assisted in all of the better known campaigns for getting on with the war.

The Jovian Central Office has on a number of occasions received the written thanks of several Government departments at Washington for work, which those departments were pleased to consider of value, in securing applications for Government service from men in civil life, and for unstinted use of the Jovian magazine for Government purposes.

The Jovian Central Office has also done what it could (as afore mentioned without specific organization for that purpose) to inspire local leagues to get behind patriotic movements. Many of the leagues have responded effectively.

We are convinced, however, that what the Order is doing of this nature does not even approximate the best of which it is capable, with the vast active and even greater latent forces which it is in a position to stir to maximum effort.

Granting that viewpoint, from which there can be no dissenting opinion, that it is now not only the honor and the privilege but the imperative duty of every American citizen and every American organization to deliver not less than 100 per cent of its available physical, mental and material resources to the cause of its country, it becomes the immediate and essential obligation of those in charge of Jovian affairs to discover and practice a method of thus firmly harnessing Jovian resources to our Government's needs.

To accomplish this, it is obvious that we may not proceed in any hit-or-miss, ill-informed, disjointed fashion, but must have, first, a practical working plan, and then effective and specific organization to operate it.

Again it is clear that if we are to turn from the Jovian mill a product 100 per cent "Win-the-war" we may not contract to weave and deliver goods of any other texture.

Upon this matter those men, honored by Jovians with the guidance of our Order this year, have concentrated their best thought. A definite plan is being rapidly shaped, together with the charting of national, field and local Jovian units to place it quickly and efficiently in force.

A meeting of Jovian Congress within the current month has been called to further perfect and ratify our new platform:

"JOVIANISM 100 PER CENT ANTI-KAISERISM."

"Every ounce of Jovian resource—mental, physical and material—to the forwarding of patritoic movements TO THE TOTAL EXCLUSION OF EVERY OTHER INTEREST AND PURPOSE, now and henceforth until America and her Allies shall triumph."

* * * * * * * *

By so doing The Jovian Order shall with an unselfish, glorious purpose, a purpose not to be denied, merge all factions, all elements, all opinions, that may within itself have in the past clouded its destiny, into a splendid, unified, representative body thoroughly worthy of the great industry to which it owes its being.

And when our cause shall have been won, the world purged of the Prussian pestilence and men shall have returned to live free from the menace of autocracy, shall not our Order then be a greater influence for industrial development because of the sacrifice it made?

Shall we not be prouder still to call our name as a Jovian?

Shall we not have justified once and for all time the allegiance of the loyal Jovians whose faith in the principles for which our Order stands remained staunch through trials and difficulties?

There can be but one answer.

HOW IT WILL HELP WIN THE WAR

It will provide for the United States and her Allies a perfected organization covering the entire length and breadth of Canada and the United States, that can be made to reach and tie into co-ordinated effort not only every city but every town and hamlet; an organization composed of men accustomed to do big things in

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a big way; men who by the very nature and requirements of their profession must be as an average in energy, brain power and training above the average of any other industry.

A ready-made centrally-directed, smoothly-running machine, with organized and intensely loyal units everywhere for immediate use in any capacity in which the Government may see fit to employ it.

WHAT IT WILL DO

It is our understanding, and entirely logical, that the Government does not encourage individuals or organizations in absorbing available resources in private and pet war activities of their own creation.

Every possible patriotic purpose is efficiently represented by some well-known and officially recognized body organized for that specific purpose. We may list some of these as:

Red Cross.
Y. M. C. A.
Liberty Loan.
W. S. S.
Belgium Relief.
American Protective League.
State Council of Defense.
Provisional Militia (Home Guards).
Four-Minute Men.
War Gardens.

What we will do will be to everywhere place behind every officially recognized war work one more organized, hard-hitting, intelligent body of men, who because they will work as an organized body, in an organized way will make every ounce of effort count and, with the same expenditure, accomplish vastly more than they could hope to do otherwise.

Entirely incidental to the main object, but none the less potent, is the fact that electrical men by using their local electrical league as the vehicles for their patriotic work, in place of some other organization, will not only best serve the interest of the Government but will earn for their great industry the recognition it deserves both locally and nationally.

It is a known truth that perhaps the greatest danger threatening America is that which destroyed Russia and brought disaster to Italy—insiduous German propaganda.

If The Jovian Order adopted the slogan and the platform here laid down for no other purpose than to systematically train, with the assistance of the Government, its fifty thousand members (and with our new, great purpose we should have no less) to the single duty of combating that propaganda the result would well justify the effort.

TENTATIVE SCHEDULE OF PROCEDURE

A meeting of Jupiter, Mercury and Congress during the current month.

Adoption of the slogan: "Jovianism 100 Per Cent Anti-Kaiserism," and a platform pledging every resource of The Jovian Order for the forwarding of patriotic, win-the-war work, TO THE TOTAL EXCLUSION OF EVERY OTHER INTEREST AND ACTIVITY.

Adoption of the same slogan and platform as the keynote of the next Jovian Annual Meeting, with the further purpose of then and there ratifying the same as the sole object of the Order for the duration of the war.

Adoption of a plan to immediately place in force an energetic campaign to secure as large and widespread attendance at this convention as possible, with the view of assuring an increasingly enthusiastic promotion of the object during the next administration.

Adoption of a plan to immediately put into effect the greatest possible forwarding of the object during the remainder of the present administration.

The plan to provide for not less than:

Pledging of all existing local leagues to the practical operation of the object, with an immediate building up of membership to increase effectiveness.

Organization of new leagues with the same idea and method.

Assignment of active duties of organization and operation to Congressmen, Statesmen and Tribunes in their respective districts.

Assignment of Statesmen-at-Large and other Jovians whose occupation of traveling makes them especially available and valuable as field captains for the assistance of district, State and local officers.

The burden of general supervision to fall upon the Central Office, with the assistance and guidance of Jupiter, Mercury and Congress. The Central Office to gather and clear to all officers and leagues the original plan, its subsequent development and the progress and experience of each league.

* * * *

LEAGUE ACTIVITIES IN WAR WORK

IT SHOULD be a source of much gratification to every member of the fraternity to observe the successful activities of a number of Jovian Leagues in connection with war work. These activities include the sale of Liberty Bonds, Red Cross and Y. M. C. A. subscription, co-operative effort for the establishment of War Chests in different localities and many other helpful campaigns.

In the Third Liberty Loan drive the New York League went "over the top" 100 per cent strong, and the St. Louis League was the first fraternal or industrial organization in its city to subscribe 100 per cent and receive an honor flag. At Mansfield, Ohio, the Jovian League was selected to open the campaign for the inauguration of the Richland County War Chest, to which it gave wonderful impetus.

These are but examples of what has been done, and what is now being done by Jovian Leagues. In many other cities their activities are producing splendid results in war work.

It is merely the direction of Jovian organization towards patriotic ends, but the results show the great advantage for the accomplishment of good made possible by Jovian organization. The spirit of the Order, "Get together and work in unity" is in evidence very plainly in the results accomplished.

* * * *

EFFECTIVE USE OF ORGANIZATION INFLUENCE

ON MAY 18 there appeared in a daily newspaper of Mansfield, Ohio, a full page advertisement inaugurating a campaign for the establishment of a War Chest in Richland County, of which Mansfield is the county seat. The heading of the advertisement was: "ONE FOR ALL—ALL FOR ONE. MANSFIELD JOVIANS WILL SUPPORT THE RICHLAND COUNTY WAR CHEST."

It was a splendid advertisement, making a direct appeal to the citizens of the County to support the campaign. We wish to emphasize a point connected with it, the importance of which from the standpoint of constructive co-operation was strongly in evidence.

Throughout the entire advertisement the Jovian League was put forward as the active force behind it, as the consolidated power of the electrical industry, and yet the advertisement was the patriotic donation of four companies: The Richland Public Service Company The National Electric Company, The Service Electric Company and The Highland Electric Company.

Here is a feature of co-operation the value of which may easily be grasped.

Did not the unselfish act of these firms in attributing their activity to the influence of the Jovian League, an organization, make it more effective by removing the possibility of the charge of personal aggrandizement? By putting the Jovian League, an organization, in the foregorund and taking credit through the Order did not their act of patriotism exert a greater influence by including the entire electrical industry of the community in it than if it had been set forth merely as the donation of the four public service companies?

Upon the answers to these questions is based one of the great values of The Jovian Order to the electrical industry; that is the possibilities it holds as the vehicle for patriotic, educational and

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civic campaigns. This possibility properly used eliminates the tendency to construe as paraded magnanimity such campaigns, or attribute them to an ulterior motive, misconstructions that frequently have destroyed truly constructive civic and educational effort.

Nor is it alone in its influence on the tendency of public opinion to criticise or discredit campaigns inaugurated by the firm or corporation that all the benefits of such co-operation may be found. In addition, consideration must be given to the fact that the entire industry is at once made a party to the transaction.

Like persons who hold stock in a company, a responsibility has been placed upon each member. The cause being worthy, naturally they feel the honor involved and the call of duty to assist.

What is true of patriotic and civic campaigns will hold good in educational campaigns with the additional reason that the members of the electrical industry are generally in possession of the knowledge that is sought to convey to the public and are cognizant of the benefits that will result from the success of the campaign.

Thus the use of the Order as the vehicle for propoganda for public consumption provides a perfect method of sympathetic contact practically impossible to secure otherwise.

* * * *

THE REVEILLE.

BRET HARTE, 1861.

Hark! I hear the tramp of thousands,
And of armed men the hum;
Lo! a nation's hosts have gathered
Round the quick alarming drum—
Saying, "Come,
Freeman, come!
Ere your heritage be wasted," said the quick
alarming drum.

"Let me of my heart take counsel;
War is not of life the sum;
Who shall stay and reap the harvest
When the autumn days shall come?"
But the drum
Echoed, "Come!
Death shall reap the braver harvest," said the
solemn sounding drum.

"But when won the coming battle,
What of profit springs therefrom?
What if conquest, subjugation,
Even greater ills become?"
But the drum
Answered, "Come!
You must do the sum to prove it," said the
Yankee-answering drum.

"What if, 'mid the cannons' thunder,
Whistling shot and bursting bomb,
When my brothers fall around me,
Should my heart grow cold and numb?"
But the drum
Answered, "Come!
Better there in death united, than in life a
recreant—come!"

Thus they answered—hoping, fearing,
Some in faith, and doubting some,
Till a trumpet voice proclaiming,
Said, "My chosen people, come!"
Then the drum
Lo! was dumb,
For the great heart of the Nation, throbbing,
answered, "Lord, we come!"

—By permission of Houghton-Mifflin Co.

Duty of the Employer in the Reconstruction of the Crippled Soldier

(Continued from page seven)

regards improvement and loses confidence every day. When he is dropped or goes to some other employment, the job will have had for him no permanent benefit.

Twelve men sent to twelve jobs may all be seriously misplaced, while the same twelve placed with thought and wisdom and differently assigned to the same twelve jobs may be ideally located. If normal workers require expert and careful placement, crippled candidates for employment require it even more.

The positive aspect of the employer's duty is to find for the disabled man a constructive job which he can hold on the basis of competency alone. In such a job he can be self-respecting, be happy, and look forward to a future. This is the definite patriotic duty. It is not so easy of execution as telling a superintendent to take care of four men, but there is infinitely more satisfaction to the employer in the results, and infinitely greater advantage to the employe. And it is entirely practical, even in dealing with seriously disabled men.

A cripple is only debarred by his disability from performing certain operations. In the operations which he can perform, the disabled man will be just as efficient as his non-handicapped colleague, or more so. In the multiplicity of modern industrial processes it is entirely possible to find jobs not requiring the operations from which any given type of cripples are debarred. For such jobs as they can fill the cripple should be given preference.

Thousands of cripples are now holding important jobs in the industrial world. But they are men of exceptional character and initiative and have, in general, made their way in spite of employers rather than because of them. Too many employers are ready to give the cripple alms, but not willing to expend the thought necessary to place him in a suitable job. This attitude has helped to make many cripples dependent. With our new responsibilities to the men disabled in fighting for us, the point of view must certainly be changed. What some cripples have done, other cripples can do—if only given an even chance.

The industrial cripple should be considered as well as the military cripple, for in these days of national demand for the greatest possible output there should not be left idle any men who can be made into productive workers.

With thoughtful placement effort, many men can be employed directly on the basis of their past experience. With the disabled soldiers who profit by the training facilities the Government will provide, the task should be even easier.

This, then, constitutes the charge of patriotic duty upon the employer:

To study the jobs under his jurisdiction to determine what ones might be satisfactorily held by cripples. To give the cripples preference for these jobs. To consider thoughtfully the applications of disabled men for employment, bearing in mind the importance of utilizing to as great an extent as possible labor which would otherwise be unproductive. To do the returned soldier the honor of offering him real employment, rather than proffering him the ignominy of a charity job.

If the employer will do this, it will be a great factor in making the complete elimination of the dependent cripple a real and inspiring possibility.

* * * *

HOLD YOUR LIBERTY BONDS!

THE AMERICAN who buys a Liberty Bond and forthwith sells it has performed only half a service for his country. To buy bonds and then sell them immediately tends to make the war burden of the country heavier instead of lighter, as it decreases the market value of the bonds.

Liberty Bonds are the safest and soundest and best investment in the world. To sell them unless imperatively required is not good business, is not good Americanism.

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Personal Pointers

Life is often what we make it,
And in fixing claims we stake it
With the boundaries of habits
Our actvity acquires;
Whether it be pain or pleasure,
We will reap it in a measure
As the harvest of the effort
That is sown by our desires.

* * * *

Arthur E. Smith, Po. 13920, recently resigned as commercial manager of the Little Rock Railway & Electric Company. He will engage in the automobile business in the City of Little Rock.

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William S. James, Po. 5832, until recently with the Rochester Electrical Supply Company, Buffalo, N. Y., is now serving on the Electrical Division, War Industries Board, Washington, D. C.

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W. A. Layman, Po. 1166-V, Seventh Mars, president of the Wagner Electric & Manufacturing Company, St. Louis, has been elected to serve on the Board of Directors of Washington University, St. Louis.

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T. D. Rauch, Po. 13918, formerly connected with the sales department of the Little Rock Railway & Electric Company, Little Rock, Ark., has been placed in charge of the complaint department, recently established by the company.

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G. C. Marshall, Po. 18624, formerly connected with the office of the American Gas & Electric Company, at Newark, Ohio, has been transferred to the Steubenville office of the Ohio Light & Power Company, and made commercial manager.

* * * *

V. L. Blanchard, Po. 10619, formerly special representative for the new business department of the Toledo Railway & Light Company, is now new business manager of the Brush Electric Company, Galveston, Tex.

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A. G. Carson, Po. 13999, recently resigned from the management of the Eastern Wisconsin Electric Company, Fon du Lac, Wis., to become associated with the C. C. Smith interests in the State of Wisconsin.

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C. C. Turley, Po. 11244, Vancouver, Wash., has resigned as manager of the Portland Railway, Light & Power Company, a position he has held for ten years, to accept a position with the Utah Power Company at Salt Lake City.

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E. C. Vickers, Po. 11026, has been promoted from the position of assistant manager of the Duquoin, Ill., division to that of district manager of the Eldorado properties of the Saline Electric Company, a subsidiary of the Southern Illinois Light & Power Company.

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Albert M. Grall, Po. 4112, formerly representative of the new business department of the Empire District Electric Company, Webb City, Mo., is now new business manager of the Ashland (Ohio) Gas & Electric Company.

J. F. OWENS, Po. 19818, vice-president and general manager of the Oklahoma Gas & Electric Company, was recently elected president of the Oklahoma Gas, Electric and Street Railway Association. Jovian Owens received his education at the University of Kansas, and taught awhile before entering the utility business. He first installed and managed the electric plant at Oswego, Kan. Then he installed the Wagoner plant at Oklahoma City. Later he was superintendent of the Caney River Gas Company. He became connected with the Byllesby interests as superintendent of the Muskogee Gas & Electric Company in 1911, and was made vice-president and general manager of the Oklahoma property in March 1918, moving his headquarters to Oklahoma City

W. R. Sammons, Po. 15057, has recently been promoted to the management of the commercial department of the Knoxville (Tenn.) Railway & Light Company. Jovian Sammons was connected with the department before his promotion.

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Henry L. Doherty, Po. 3208-33, Past Jupiter Fifteen, president of Henry L. Doherty & Company, Inc., New York, was recently given the degree of doctor of laws at the commencement of the Lincoln Memorial University, Cumberland Gap, Tenn.

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J. C. Breeding, Po. 2066, formerly manager of the Stamford (Texas) Gas & Electric Company, is now manager of the Longview Ice & Light Co., Longview, Tex. He succeeds W. B. McNaughton, who recently resigned.

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Robert A. Wood, Po. 11038, Galveston, Tex., is now in charge of the Christian Science work at one of the army camps in Texas. Before taking up war work, Jovian Wood was manager of the Brush Electric Company at Galveston.

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H. A. Cowgill, Po. 13850, formerly connected with the traction department of the St. Joseph Railway, Light, Heat & Power Company, has been made general superintendent of the Mansfield, Ohio, Traction System.

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ROBERT F. PACK, Po. 7836, vice-president and general manager of the Northern States Power Company, Minneapolis, Minn., who has recently been appointed a member of the State Board of Arbitration and Conciliation by Governor Burnquist. The board was organized following the artification of an agreement between labor and capital in Minnesota, and it has been agreed by them that all labor troubles in the state will be settled by the board without appeal to federal assistance

M. W. ARTHUR, Po. 17679, who for the past seven years has been connected with the railway and power department of the Westinghouse Electric & Manufacturing Company at Cincinnati, has resigned to accept the position as superintendent of sales for the Northern Ohio Traction & Light Company, Akron, Ohio.

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D. C. GOULD, Po. 10821, who has been connected with the Willard Storage Battery Company for a number of years as district manager of the Chicago territory, has been transferred to Indianapolis, Ind., by that company and made manager of its branch at that point.

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HOWARD F. VIOT, Po. 2156, for the past ten years manager of the Omaha district of the Shelby Lamp Division, National Lamp Works, has recently been promoted to the management of the Chicago district for that company, with headquarters at 730 South Michigan Ave., Chicago.

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THOMAS M. CLULEY, Po. 2880, who has been associated with the Union Electric Company, Pittsburgh, for the past twenty-two years, has resigned and is now connected with the W. A. McComb Company, of that city. The company manufactures safety switches and is territorial representative of a number of manufacturers.

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F. E. MCCALL, Po. 12267, formerly with the sales division of the Philadelphia Storage Battery Company, recently resigned and joined the sales forces of the Walker Vehicle Company, Chicago. Before his connection with the Philadelphia Company, Jovian McCall was with the Commonwealth Edison Company, as an electric vehicle engineer in its contract department.

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O. W. JONES, Po. 17164, commercial manager of the Texas Power & Light Company at Waco, Tex., has been transferred to Cleburne, Tex., and made manager of the Cleburne district. Prior to going with the Texas Power & Light Company in 1916, Jovian Jones was engineer of distribution with the Columbus, (Ohio) Railway, Light & Power Company.

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C. L. PROCTOR, Po. 19567, until recently new business manager for the Empire District Electric Company, Joplin, Mo., has been made general manager of the Danbury (Conn.) & Bethel Gas & Electric Light Company. Jovian Proctor had been connected with the Joplin Company for three years. Prior to his connection with it he was general superintendent and purchasing agent for the Athens, Ga. Railway & Electric Company.

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F. E. LAUDERBACH, Po. 11655, formerly supervising engineer and manager of the St. Louis branch of the National X-Ray Reflector Company, has been appointed district manager for the Bussman Manufacturing Company, St. Louis. Jovian Lauderbach will have charge of the company's sales in the states of Ohio, Pennsylvania, West Virginia, Virginia, North Carolina, South Carolina, Georgia, Florida, Tennessee, Kentucky and Indiana.

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J. C. CHESTNUT, Po. 14873, is now general manager of the Choctaw Power & Light Company, McAlester, Okla. Jovian Chestnut was formerly superintendent of the New Castle (Pa.) Electric Company, a subsidary of the Mahoning & Shenango Railway & Light Company. Prior to his connection with the New Castle Company he was superintendent of the Shenango Valley Electric Light Company, Sharon, Pa.

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WILLIAM BAUM, Po. 19082, has resigned his chair as dean of the School of Engineering, of Milwaukee to become research engineer for the Milwaukee Railway & Light Company, an office that has been newly created. Jovian Baum has been dean of the School of Engineering for the past two years. Before engaging in educational work, he was connected with the General Electric Company for 14 years.

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A. W. LEONARD, Po. 5165V, president of the Puget Sound Traction, Light & Power Company, Seattle, Wash., has been placed in charge of the training camp activities for the State of Washington. Jovian Leonard has been actively identified with the Soldiers and Sailors Club of Seattle for some time. His appointment was brought about through the recommendation of the State Council of Defense.

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W. S. Rugg, Po. 12016, has become manager of the railway department of the Westinghouse Electric & Manufacturing Company, with headquarters at Pittsburgh, having recently resigned his position as district manager of the New York sales office of the company to accept the position. He succeeds C. S. Cook, who recently resigned from the company to become general manager of the Duquesne Light Company of Pittsburgh.

* * * *

M. C. TURPIN, Po. 5138, has resigned his position as assistant manager of the department of publicity, Westinghouse Electric & Manufacturing Company, to enter the federal service as assistant manager of the Technical Publicity Bureau, Ordinance Department. His work will consist of the dissimination of information from the War Department to manufactures through the medium of the trade press. Jovian Turpin is a graduate of the Alabama Polytechnic Institute and of Cornell University.

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J. H. VAN BRUNT, Po. 13862, vice-president and general manager of the St. Joseph Railway & Light Company, St. Joseph, Mo., was elected president of the Missouri Association of Public Utilities at its recent annual meeting in St. Joseph. Jovian Van Brunt, who was connected with the banking house of R. B. Newcombe & Company, was put in charge of the receipts of the St. Joseph Railway & Light Company, in 1889, when the property was purchased by the former company. Shortly afterwards he was made superintendent of the railway department of the company. In 1902 he was elected vice-president and general manager.

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CHARLES A. COFFIN, Po. 2394-22, chairman of the Board of Directors of the General Electric Company, Schenectady, N. Y., head of the Franco-American Clearing House in New York, was made an officer of the Legion of Honor at a dinner May 13, in recognition of the services he has rendered as a member of the War Relief Clearing House for France, and his efforts to establish scholarships in French universities for American students after the war. The honor was conferred by the French Government through M. Justin Godard, who was in this country on a special mission.

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SAMUEL KAHN, Po. 373, vice-president and general manager of the Western States Gas & Electric Company, Stockton, Cal., is president elect of the Pacific Coast Section of the N. E. L. A. Jovian Kahn, who was born at San Antonio, Tex., October 18, 1882, received his education in San Antonio, at the University of Texas and at Purdue University. He graduated from the latter institution in 1903 with the degree of bachelor of engineering. He began his career as engineer for the San Antonio Gas & Electric Company and the San Antonio Traction Company. Subsequently he was connected with other companies. In 1913 he became vice-president and general manager of the Western States Gas & Electric Company, the position he still occupies.

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OBITUARY

DUNCAN H. GRAFF, Po. 3803, sales manager, American Carbon & Battery Works, East St. Louis, Ill., died at the Missouri Baptist Sanitarium, St. Louis, May 7. He had been connected with the East St. Louis company for about a year and one half. Jovian Graff was formerly connected with the Ever Ready Company, and and was manager of the Pittsburgh office of that company when he joined the Order at a Rejuvenation held in that city in 1911.

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FRANK E. GETTS, Po. 13546, general manager of the Electrical Engineers' Equipment Company, Chicago, Ill., died May 7 at Los Angeles, Cal. His death was the result of over exertion which caused an artery near his heart to burst. Jovian Getts had a wide acquaintance in the electrical industry. He was formerly connected with the Siemens-Halske Company and later with the General Electric Company.

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W. F. HOUGHTON, Po. 12099, manager of the lighting and fixture department of the Southwest General Electric Company, Dallas-Tex., died at St. Paul Sanitarium in that city, May 9. Jovian Houghton was twenty-seven years old, having been born at Ennns Tex., December 24, 1891. He was a member of the Christian Church, with which he became affiliated in 1902, when eleven years old. He is survived by his wife, mother, two sisters and one brother, to whom The Jovian extends the sincere sympathy of the fraternity,

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ALEXANDER BROWN, Po. 1057V, district manager of the Western Electric Company, Denver, Colo., died while seated in his auto in Cold Creek Canon, near Boulder, Colo., Saturday, June 1. His wife and daughter were with him at the time. His death is attributed to heart disease. Jovian Brown was born in West Troy, N. Y., and had been a resident of Denver for nineteen years. He had been local manager for the Western Electric Company at that point for the past twelve years. He had been a member of the Order since June 13, 1907, having been initiated at a Rejuvenation held at Denver on that date. The Jovian extends the sincere sympathy and condolences of the fraternity to his wife and family.

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JAMES T. MAXWELL, Po. 3721, of the commercial department of the Philadelphia Electric Company, died at his home at Woodbury, N. J., Monday, May 27, after an illness of several months. He was sixty-eight years of age, and had been connected with the electrical industry the greater part of his life, having taken up the work of telegraphy when a young man. Later he became connected with the Bankers and Merchants Telegraph Company as manager and through his efforts the institutions became very popular. In 1888 he entered the service of the Edison Electric Light Company as general agent of the contract department and later served in the same capacity with the Philadelphia Electric Company. He was for a number of years actively associated with a number of technical and scientific associations and societies, with which he served at various times in official capacities. He is survived by a wife to whom the Jovian extends the sincere sympathy and condolences of the fraternity.

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NEW YORK LEAGUE OUTING AND REJUVENATION

MORE than two hundred members of the New York Jovian League, with their wives and guests, attended the annual outing and Rejuvenation held at the Hotel Shelburne, Brighton Beach, Coney Island, Saturday afternoon and evening, June 15.

The day was an ideal one for the event, which together with the luxurious accommodations of the hotel, and the special preparation for the affair made the outing an enjoyable one.

First Tribune, George V. W. Pelz, Po. 18674, presided over the ceremonies at the Rejuvenation which took place in the afternoon. He delivered the short form initiatory ceremony to four candidates; George H. Williams, Bryant Electric Company; Samuel Levine, General Electric Company; Thomas J. Finn, Electrical Products Company, and Edwin Hirchberger, Electrical Journal.

During the shore dinner served by the hotel management, the revue, "The Shelburne Girl," was specially produced under the direction of Edward P. Bower for the entertainment of the Jovians. The production of the revue required a cast of forty principals, augmented by a large chorus, and was decidedly one of the best features of the outing.

Dancing, of course held an attraction for many of the members and guests, a large number of whom responded to the call of the orchestra.

There were many other enjoyable features connected with the outing and Rejuvenation which is regarded by many as one of the most successful ever held by the League, and will long be remembered with pleasure by all who attended.

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AMERICA FIRST

THE Turnverein Club, of Joplin, Mo., has voted to disband forever and to give its property, valued at $25,000, to the American Red Cross Society. The words with which this organization has put itself on record ring with patriotism. They ought to be framed in the home of every foreign-born citizen:

"We must realize the vastness of the change of conditions. * * * It is a unique situation, but it is a surprisingly clear and plain situation. We left one country. Why? Because we were not satisfied with our conditions. We entered another country with the full knowledge (unless we were lunatics) that we had to abide by the rules and conditions imposed by this new country. The new country was very lenient with us. We hardly knew that we were being governed. To us this war comes like a bolt of lightning out of a clear sky. We are awakened from a dream, awakened to the realization that when we changed countries it was also our duty to change our sentiments and sympathies. The object of the Verein is to advance German customs, German habits, and the German language. This is, under the conditions which have arisen, intolerable and impossible. Our countrymen cannot and will not and should not be expected to countenance the existence of our Verein."

This is 100 per cent Americanism.

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RECENT REJUVENATIONS

ATLANTIC CITY

FIRST TRIBUNE, A. J. Purinton, Po. 9643V, was in charge of the Rejuvenation held at the Morris Guards Hall in Atlantic City, May 6. The affair brought out a good attendance of members and several visitors from other cities.

Seven candidates presented themselves and were initiated, prominent among whom were Wm. D. Taylor, Jr., instructor, Board of Education; Walter Irving Raymond, electrical contractor, and George Zipplee, Jr., National Machine Works.

First Tribune, Purinton, presided at the Joviation, and introduced as speaker, S. H. M. Agens, Po. 456, Newark, former statesman for New Jersey, who made a talk on Jovianism.

The initiation was conferred by the Degree Team, composed of the following members: Jupiter, T. E. Valentine, Po. 445; Neptune, Harry J. Hornung, Po. 5370; Pluto, H. M. Slanson, Po. 14445; Vulcan, H. McDowell, Po. 3376; Mercury, A. J. Purinton, Po. 9643V; Hercules, Meyer Rutkin, Po. 6600; Mars, S. H. M. Agens, Po. 456, and Apollo, H. J. Hornung, Po. 5370.

Members who from reports deserve special mention for making the Rejuvenation a success are: Wm. Bach, Po. 14194; George P. Proffatt, Po. 20244; Frank Shinnen, Po. 11193V, and H. C. Stockinger, Po. 20249.

This Rejuvenation increased the active membership of the Atlantic City League to 35, and a campaign will be inaugurated in the near future to increase it to 50 or more.

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OKLAHOMA CITY

FOURTEEN candidates were initiated at the Rejuvenation held at the Lee Huckins Hotel, Oklahoma City, on the evening of April 23. Delegates to the Electric, Gas & Street Railway Association, of Oklahoma Convention were guests, and both the Rejuvenation and Joviation held in connection with it were enjoyable affairs.

Among the prominent candidates was F. D. Shaffer, manager, Chicasha Light & Power Company, Chicasha, Okla.

Notable guests present were: E. C. Brown, Po. 255, Kansas City, and W. R. Molinward, Po. 6868-74.

First Tribune, A. V. Hancock, Po. 2809, presided as chairman of the Joviation, at which the Lee Huchins cabaret performers supplied the entertainment.

Workers who according to reports were active in making the affair a success were: H. H. Hermes, Po. 19898; J. L. Nunn, Po. 16104; A. V. Hancock, Po. 2809, and W. C. Christy, Po. 19425.

The following members composed the Degree Team that conferred the initiation:

Jupiter Galen Crow, Po. 925V; Neptune W. H. Tucker, Po 20300; Pluto, W. H. Christy, Po. 19425; Vulcan R. D. Shelton Po. 18856; Mercury, A. D. McMullen, Po. 20298; Hercules, W. J. Murphy, Po. 10509; Mars, E. T. Gunther, Po. 20057; Apollo, W. H Stout, Po. 961; Imps, J. L. Nunn, Po. 16104, and W. K. Danvers Po. 18841.

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AKRON, OHIO

THE AKRON LEAGUE held a Rejuvenation at Young's Hotel about five miles from the city on the evening of May 21 initiating eleven candidates.

About fifty members of the Order were present including members of the League and Jovian visitors from other cities.

First Tribune, E. Burt Fenton, Po. 18446 was in charge of the arrangements and candidates.

Prominent among those initiated were: Frank I. Hardy, general superintendent, Northern Ohio Heat & Light Company and Herbert Tinker, superintendent of lines, Northern Ohio Heat & Light Company.

The place selected for the Rejuvenation and Joviation is a road house situated on a small lake, and is just a pleasant drive from the city.

Both the trip and the affair proved enjoyable. The Degree team was well prepared to administer the initiation, which was concluded with just a little side degree work—enough to afford a little amusement and add to the pleasantry of the occasion.

Following is the Degree Team: Jupiter, Fred Sinks, Po. 19066; Neptune, S. C. Henton, Po. 19060; Pluto S. W. Sweet, Po. 20333; Vulcan, E. S. Martin, Po. 20321; Mercury, Po 20336; Hercules, R. E. Duchene, Po. 14999; Mars, T. S. Munsell, Po. 20325; Apollo, H. W. Kaiser, Po. 20318; Imps, Guy Souers, Po. 14401, Geo. W. Wengel, Po. 14409, Geo. A. Wherley, Po. 14411, E. T Johnston Po. 16592, and J. B. Conley, Po. 14366.

* * * *

WILMINGTON, DELAWARE

WILMINGTON Jovians held a splendid Rejuvenation and Joviation at Hanna's Cafe, in that city on the evening of May 28. Twelve candidates were initiated, included among whom were Walter S. Briggs, Andrew W. Crawford and others prominently identified with the local electrical industry.

The attendance numbered 33, including several visitors from other cities.

First Tribune H. E. Shelton, Po. 14400, was in charge of the candidates, and Henry K. Miller, Po. 20028, president of the League, presided as chairman of the Joviation.

The speakers were Martin J. Wolf, Po. 6027-89V, Fifteenth Ajax, W. E. Bischoff, Po. 3190 and W. N. Hein, Po. 10123.

In his address, Jovian Wolf called special attention to the co-operative work and initiative that had contributed to the growth and development of the country, and showed that it was for the greater, more effective application of these principles that the Jovian Order is striving.

H. E. Shelton, Po. 14400, First Tribune of Wilmington, was nominated as choice of the League as a candidate for Jovian Congress for its district at the next annual convention.

C. J. Schaefer, Po. 2252, chairman of the entertainment committee, announced that plans were under way for a field day to be held by the Jovians, June 22.

Entertianment was furnished by a band from the Sixth Company Fort Du Pont.

The condensed Ritual Form was used for the initiation of candidates.

* * * *

MISSOURI ASSOCIATION OF PUBLIC UTILITIES CONVENTION

THE TWELFTH annual convention of The Missouri Public Utilities Association was held at St. Joseph, Mo., May 17 and 18, with about 100 in attendance.

Bruce Cameron, Po. 10790, president of the Association being absent, the convention was called to order by former president, Hugo Wurdack, Po. 9655.

Dr. J. C. Whitsell, mayor of St. Joseph, delivered an address of welcome to the delegates, and was responded to by Henry W. Kiel, Po. 12312, Mayor of St. Louis.

The annual address of President Cameron was read by the secretary. Conditions under which utility companies are operating was set forth as the principle reason for holding the convention.

The following officers were elected for the ensuing year:

President, J. H. Van Brunt, Po. 13862; First Vice-President J. M. Scott; Second Vice-President, L. P. Andrews; Third Vice-President, Herman Spoehrer, Po. 3947; Secretary-Treasurer, Frank D. Beardslee, Po. 3931V.

Executive Committee: L. H. Egan, Po. 10557; J. E. McLeod, Po. 11670; Col. P. J. Kealy, Po. 16571 and B. C. Adams, Po. 19555.

Public Affairs Committee: I. R. Kelso, Po. 17940, chairman; E. D. Bell, Po. 9925; J. R. Woodfill; C. L. Proctor; V. L. Elbert; J. F. Porter, Po. 2097-70; Bruce Cameron, Po. 10790, and E. C. Deal, Po. 17246.

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

The Greater Strength

By W. R. J.

The flesh is weak and often fails,
There lie beside life's beaten trails
The ghost of many a vision dreamed
And aspirations unredeemed.

Great were the hopes they held and high,
If you could rise and pass them by,
Star-lit ambitions just as fair
As those you hold are bleaching there.

Each silent ghost lies where assailed
By that despair whereat it failed;
The obstacle, though great or small,
But roused the fear that caused its fall.

While faith still holds the fight goes on,
The sword may break, the strength be gone,
But fate will not a finis write
As long as faith is in the fight.

Where rise the higher walls to scale,
Where waves dash high beneath the gale
Seek not the end, but seek it where
Faith left the fighter in despair.

Seek not the path the victor strode
Along some laurel blooming road,
But where faith gave him hope to breast
The wildest storm below each crest.

Essays On Financial Activities

STOCK SELLING.

THE SALE of stock is an art, a science, a perfected plan of operation and the amalgamated practice of capitalizing visualized hot air. Without resorting to or infringing upon language that might be drastically censured what more can we say to describe.

The fundamental basis of all stock is paper. Back in the remote ages we understand this was not the case. Stock in the dark ages was considered of no value unless issued upon sheep skin. Think of this ancient practice and its significance. The very idea of skinning one sheep in order to fleece another. Our forefathers were certainly a crude set, with utterly no regard for propriety!

From a practical angle let us consider the great task of this superstitious practice upon the sheep industry. Looking backward now we can readily perceive that the failure of the "Mississippi Bubble" was a benefit rather than a calamity. Suppose it had succeeded; sheep as a species would now be extinct. There would have been so many stock companies formed and so much stock sold that the demand for sheep skins would have been a thousand hides per sheep capita. Only the exhaustion of the hide supply would have curbed organization. But the bubble bursted and stock became somewhat unpopular.

Following the development of the paper industry, stock sales were gradually revived. Paper offered a far greater possibility for design. It held printers ink to a much better advantage, and as a basis for gold and colored ink it far excelled bleached sheep-skin. Then, too, it was much less expensive, making possible the most gaudy and elaborate certificates to sell as low as ten cents. There are even records to show that in some instances, fly-specked or shop-worn certificates of the most artistic design have been sold as low as two cents, a price altogether impossible while sheep-skin was used as a legal tender.

At present the sale of stock is being given a wonderful impetus by precedent.

Take, for instance, the following disclosures which we quote from prominent salesmen we have met:

"The shares we issue are wonderfully similar to those of the Billion Buck mine. In fact they are even a little more artistic in design."

"The picture of our oil drill on this stock certificate is far superior to the machine used to bore the Giant Gusher."

"You will note the striking resemblance of the picture of the president of our company on this stock certificate to Dan'l Boone, so you can readily perceive what a great demand there will be for our patent fur shiner."

"This very design of Consolidated Pickling Borax Stock is now paying the Sour Vinegar Company a million dollars an hour dividends."

These and other arguments that can not possibly be refuted are among the strong points made by the modern stock salesman. The idea that the possession of a few shares will not make you immensely rich is, of course, preposterous, and of too trivial consequence to be alluded to except casually or inadvertently.

All of which goes to show the progress made in stock selling, and the fact that the people are still inclined to take a chance, even if there isn't any chance.

Influences and Impressions

By W. R. J.

Of youthful impressions and training and such
When a fellow grows older he may not think much;
A knock on the head or a jolt to his pride
And it upsets the rule and the standards that guide.
For instance when young we were frequently taught
That no good little boy acted rudely or fought,
And Jimmy Mullane, who did both and then some,
Would never amount to a snap of your thumb;
But Percival Good, who was always polite,
Would be a great man for refusing to fight,
And then in his greatness according to rule,
He'd be a great honor to teacher and school.
Now what do you think were the facts in the case,
When Percy and Jim took the jolts in life's race?
Why Jimmy Mullane took the teacher's advice
Because of the lickin's he'd got more than twice,
He settled right down to be docile and kind
And now he's the best little porter you'll find.
Folks kick him about and they toss him a tip
For he doesn't talk back when they give him some lip.
But Percival Good, once so meek and so mild,
Who never got lectured at school when a child,
Learned a lesson or two that he couldn't well miss
From his schoolmates who licked him and nicknamed him "Sis".
Now Percy's the head of a great, big concern,
And he sees that the fellows beneath him all earn
Every cent of their pay for he has at command
A punch to his language they all understand.
So it's seldom revealed in the actions of youth,
What they'll be when they're grown—'tis a problem forsooth.
The work of the teacher may make some polite,
While the scorn of their playmates teach others to fight.

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100% DIVIDEND ON

JOVIAN INSURANCE is one of the few directions in which you can reduce expense and yet sacrifice none of the protection you should have.

Every Dollar you can save in this way makes you just that much more able to help with the war activities.

Every Jovian policy is a clean-cut proposition, without any strings to it; no ifs or buts; no exceptions or assessments.

If not already covered by Jovian Insurance you are overlooking one of the distinct advantages of your membership, for which you are paying, and in which the Jovian Central Office stands ready to serve you without charge.

CALL it Dividend or [illegible] **that, instead of pa** [illegible] **$5,000 accident insuran** [illegible] **his membership in th** [illegible] **only twelve dollars, an** [illegible] **retains (the thirteen do** [illegible] **is more than one hund** [illegible]

★ ★

The table below shows [illegible] **(from 75% to 112%) in** [illegible]

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POLICIES AND COMBI

Single Accident Policy	
Double Accident Policy	
Single Health Policy	
Double Health Policy	
A Single Accident and a Single Health Policy	
A Single Accident and a Double Health Policy	
A Double Accident and a Single Health Policy	
A Double Accident and a Double Health Policy	

Clip and Mail the Coupon Today

As a Member of the Jovian Participation in Y

TODAY IS NONE TOO SOON TO TAKE OUT

IF YOU SO DESIRE, DATE YOUR APPLICATION TO TAKE EFFECT WHEN SOME OF YOUR PRESENT INSURANCE EXPIRES — PAY NOT UNTIL YOU RECEIVE THE POLICY.

THE JOVI

SYNDICATE TRUST BUIL

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OVIAN INSURANCE

it Savings, it holds true twenty-five dollars for a olicy, a Jovian, because of der, is able to get it for e saving or dividend he that is left in his pocket) er cent of the cost.

★ ★

w the saving is present ry Jovian policy issued

THE COST of a Jovian Single Accident policy is less than four cents per day, and this small outlay will protect you or your estate in case of accident.

Six cents per day will cover you in case of illness.

Payment of premium may be made quarterly if desired, thus permitting you to pay as you earn.

The protection under Jovian Insurance is so ample, the premium so low (net cost), and the payments arranged so conveniently that no Jovian can afford to be without one or both of the kinds (accident and health) issued.

AN
TIONS NOW AVAILABLE

ual ium	Approximate Annual Saving	Per cent of Saving
.00	$13.00	112
.00	26.00	108
.00	15.00	75
.00	30.00	75
.00	28.00	87½
.00	43.00	82
.00	41.00	93
.00	56.00	87½

Order
vian Insurance is
r Already-Paid-For Privilege

MORROW MAY BE TOO LATE)
OVIAN POLICY

N ORDER

ST. LOUIS

EVERY DOLLAR YOU INVEST IN JOVIAN INSURANCE, RELEASES NEARLY ANOTHER DOLLAR FOR YOUR OTHER PRESSING NEEDS.

Sign—Tear Out—Mail NOW!

THE JOVIAN ORDER

GENTLEMEN:

Send me complete information relative Jovian Accident and Health Insurance at greatly reduced rates.

(Signed) .....

(Address) .....

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NEWS OF JOVIAN LEAGUES

Kansas City

The regular luncheon meeting of the Kansas City League at the Hotel Muehlebach Friday, April 26, was one of the most enjoyable held during the season. As the luncheon was held in the midst of the Third Liberty Loan drive in which many members of the League were actively engaged, the attendance was not large. However, it has become a custom of the members to subordinate all other activities to war work, and the fact that they deny themselves the pleasure of the meetings to engage in patriotic activities is appreciated by the members who can attend.

H. R. Ennis, was speaker at the meeting. He took for his subject "The Illicit Sale of Drugs in Kansas City," and described this injurious traffic in detail, citing many instances that have come to his notice in the investigations he has conducted. He made a splendid appeal to Jovians and all other citizens to aid in stamping out the unlawful traffic in drugs.

* * * *

Mansfield

Mansfield Jovians have been devoting their efforts almost exclusively to patriotic movements in the past few months; but their latest, that of inaugurating and boosting the movement to establish a War Chest is an achievement for which they deserve much credit. In this movement the Jovian organization was selected to open the campaign, which was inaugurated May 20. J. F. Sells, Po. 8797, illuminating expert of the Richland Public Service Company, was made chairman of the Jovian War Chest Committee. Back of Jovian Sells and his committee was the entire electrical industry, and a parade and special illuminating features were the chief features in the demonstrations staged. The four public service companies entered heartily into the movement and donated advertisements in the local daily papers boosting the War Chest campaign and tying the Jovian League prominently into the movement for the establishment of a War Chest.

* * * *

New York

Frank Dixon, Red Cross Commissioner to France, was the speaker at the luncheon meeting of the New York League, May 15. He took for his subject, "My Personal Experiences in France," and gave a vivid outline of conditions, the work being accomplished and many interesting features of the Red Cross achievement on the battle fields and back of the lines.

Arrangements were made for the Summer Rejuvenation and outing of the League to be held at the Hotel Shelburne, Brighton Beach, N. Y. June 15.

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Los Angeles

The Los Angeles League has enjoyed a number of splendid meetings during the season. Its committees have secured some of the most prominent speakers to be had, and the subjects have been interesting and timely.

At the meeting of May 15, H. Hinkovic, a former member of the Croatian Parliament and member of the Jugoslav Committee, of London, was the speaker. He took for his subject, "European Politics and Racial Differences."

* * * *

Cleveland

Rt. Rev. Frank Du Moulin, Bishop coadjutor of Ohio, one of the most forceful and prominent orators of the country, addressed the Cleveland League at its luncheon meeting, May 2. His address was elevated above the sordidness of war and he showed the good that is to come and is coming out of the awful struggle. He described the state of transition of the human race, and the new type of man that was developing.

Announcement was made that the Ohio Electric Light Association would hold an all-day meeting in the League Rooms, May 8.

The sale of Liberty Loan Bonds at the previous meeting was announced to be $13,250.00.

Describing how the number of men in the United States Navy grew from 55,000 to 350,000 in one year, Lieut. John H. Clark U. S. N., held the audience deeply interested throughout his addres to the League, May 9. He also included in his talk an explanation of how the personnel of the Navy had expanded.

Sergt. Major Bracken of the First Canadian Contingent gave a graphic description of fighting.

Private Barney Harding also gave an interesting description of trench life and trench warfare, and told some highly interesting stories of the boys at the front.

Homer McKeehan, gave a vivid description of the scenes he witnessed in the hospital at Toronto in his address at the luncheon meeting of May 16.

Andrew Squires, presided as chairman of the meeting.

Horace H. McArthur, private, Canadian Army, who was captured by the Germans and held a prisoner two years and five months, was the principal speaker at the luncheon meeting May 23. Private McArthur described his three unsuccessful attempts to escape the treatment he received while a prisoner, and his final and successful attempt to escape.

J. M. Smith, Po. 3267, presided as chairman.

A ballot containing the nominations for members of the Board of Directors was made a part of the announcement folder of the meeting of May 29, and contained the following nominations:

H. A. Stevenson, L. H. Counchey, H. K. Williams, Po. 2483, F. C. Maxheimer, G. S. Milner, Po. 2457, H. L. Schneider, P. B. Zimmerman, Po. 7305V, R. S. Mueller, Po. 7290, Ray Kaufman, A. B. Wilson, Po. 9549, Harry Hutchisson, J. H. Scobell, F. R. Du Guay, Po. 1678, J. M. Smith, Po. 3267, J. H. Davies, and N. H. Boynton, Po. 5604.

The speaker was Wm. T. Clarke, attorney, a Civil War Veteran, who took for his subject, "Grand Army Reminiscences."

* * * *

St. Louis

The month of May was devoted nearly entirely by the St. Louis Jovian League to joint meetings with the Rotary Club and the Advertising Club, and several splendid meetings were held that fully justified the consolidation of the three organizations for luncheon purposes.

The first meeting of the month, May 7, was held under the auspices of the Advertising Club, the Rotarians and Jovians being guests, and an attendance of about 350 were present.

Dr. Preston Bradley, of the Peoples Church, Chicago, was the speaker, taking for his subject "Democracy in the Making."

In addition to being a minister, Dr. Bradley is a lecturer and writer and has traveled in the various countries of Europe since the war. His address was one of the most intelligent and forceful arraignment of Prussian Militarism the members of the League have heard this season.

The Jovian League was in charge of the meeting of May 14, with members of the Advertising Club and the Rotary Club as guests. This meeting also brought out an overflow attendance.

Prof. Otto Heller, professor of modern languages of Washington University was the speaker,, and took for his subject, "What Then Shall We Do?"

In speaking of German ruthlessness, he clearly set forth the duty of Americans of German extraction, placing upon them even a greater obligation of giving to America their utmost efforts to aid in defeating the German Autocracy, than upon Americans of other nationalities.

Capt. Robert H. Gross, of the First Missouri Home Guard, made a splendid appeal for citizens and men in the deferred draft to enlist in that organization and get the military training it would give them.

Ell C. Bennett, Mercury of the Jovian Order, presided as chairman, and also made an appeal for enlistments in the Missouri Home Guards, of which he is a member.

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May 21, the meeting of the League was held at the American Annex Hotel.

George S. Johns, editor in chief of the St. Louis Post Dispatch, was the speaker. In his subject, "National Morale," he showed the value of morale to the army and the nation in the great struggle now going on. He cited the people of Russia as an example to show the benefit of the right kind of publicity and the danger arising from false propaganda.

Frank D. Beardslee, Po. 3931V, Fourteenth Ajax, presided as chairman.

The last meeting of the season, May 28, was another joint one with the Advertising Club.

Samuel A. Davis, of Cleveland, was the speaker.

Mr. Davis, who is known as a "business apostle" and a "whirlwind orator," delivered a splendid address, showing the value of the right kind of thinking and the development of thought.

Nominations for officers for the League for the ensuing year were announced by the nominating committee, consisting of Isaac A. Hedges, Po. 10798; Ell C. Bennett, Po. 3932-13V; T. K. Stevenson, Po. 11018; Charles Scudder, Po. 1078, and F. E. Briner, Po. 11551.

Following are the nominations: President, E. H. Waddington, Po. 5176V; Vice-President, B. H. Mann, Po. 16756; Secretary-Treasurer, George McD. Johns, Po. 9052.

Executive Committee: Charles Orth, Po. 11685; Thomas O. Moloney, Po. 802; Wm. Gallaher, Po. 1072, and Fred B. Adam, Po. 242-82V.

* * * *

Chicago The largest attendance of the season was present at the Jovian luncheon meeting of May 2. The speaker, S. J. Duncan-Clarke, war analyst for the Chicago Evening Post, dealt principally with German expectations and ambitions in the war. He showed conclusively how they had failed in their drive started March 21, and how the plan of warfare dictated by the German high command had been crushed.

M. A. Mott, Po. 17507, of the Advisory Committee of the Electrical Industry, State Council of Defense announced that the League had filled at least 12 vacancies in the Signal Corps for men of draft age.

Dana Pierce, Vice-President and Electrical Engineer, in charge of the Underwriters' Laboratories, New York, made an interesting address before the League May 9. He described some of the recent developments in the testing of the Laboratories and mentioned some of the tests which they had made for the Government.

A resolution of respect for Frank E. Getts, Po. 13506V, whose death occurred May 7, was presented by the Welfare Committee at the meeting of May 16.

The speaker on that date was Marcus Stow Hill, who in his address made some startling revelations concerning the ignorance of the Russian people. His address threw a light on many of the influences that swayed the inhabitants of that unfortunate country.

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Houston The Houston League continues to make its regular luncheon meeting day one for an advertising demonstration by the industry, and is finding the plan of using a page in the local papers, co-operatively, both profitable and satisfactory. An appropriate design has been made to head the page advertisements, which effectively ties the industry and the Jovian League together.

At the meeting of the League June 10, Mayor Amerman was the principal speaker. He discussed a number of features of the city administration of interest to the electrical industry and to the public in general.

Following the mayor's address, impromptu talks were made by Clarence R. George, Po. 368, city electrician, County Engineer Wise, and City Engineer Sands.

JOVIANISM 100 PER CENT ANTI-KAISERISM

SOCIETY FOR ELECTRICAL DEVELOPMENT HOLDS ANNUAL MEETING

THE ANNUAL meeting of the Society for Electrical Development, was held in the offices of the Society, New York, City, May 14.

James R. Strong, Po. 742 Sixth Pluto, presided and called the meeting to order:

James M. Wakeman, Po. 524, Fifth Apollo, general manager of the Society read his annual report, reviewing the work done during the past year, and suggesting activities for the coming year.

After the reading and adoption of the treasurer's report, the election of directors was held, which resulted as follows:

Directors representing Central Stations; J. E. Montague, Po. 499, four years; W. W. Freeman, Po. 1899V, two years; E. N. Sanderson, one year.

Directors representing manufacturers; J. P. Sawyer, Po. 193, four years; W. D. Steele, one year.

Director representing jobbers; Fred Bissell, four years.

Director representing contractors; G. M. Sanborn, four years,

J. E. Montague, Po. 499, presided at the Directors' meeting, which followed the annual meeting. It was decided to continue the work of the Society for another year upon the present basis, and to conduct a "Convenience Outlet" campaign as suggested by General Manager Wakeman.

The election of officers was then held with the following results: President, Henry L. Doherty, Po. 3208-33, Fifteenth Jupiter; Vice-President, Joseph E. Montague, Po. 499; Chairman of the Executive Committee, Gerard Swope, Po. 16243.

James M. Wakeman, Po. 524 was reappointed general manager, and James Smieton, Jr., Sectetary-treasurer for the ensuing year.

* * * *

THE BEST INVESTMENT IN THE WORLD

FROM whatever angle it may be considered, an investment by an American citizen in Liberty Bonds or War Savings Stamps is the best investment in the world.

The money so invested goes to the Government, which loans some of it to our allies; all of it is used in one way or another to maintain, support, arm, equip, and make victorious our armies, and our allies in Europe. Surely no American money could be put to a better purpose. Here is an investment in the power and success of our country, an investment in the efficiency, strength, safety, and success of our fighting men on sea and land.

We do not know what commercial and industrial conditions are to be when the war closes, but we do know that a Liberty Bond and other United States Government securities will be sound and secure. Every dollar loaned the Government by our people now is a dollar saved for the time when peace comes. With their savings invested in these sound securities, the American people will be well prepared to meet the problems that peace will bring. It is a species of insurance for that day.

* * * *

NEW YORK STATE COMMUNITY KITCHENS

LAST YEAR community canning kitchens sprang up all over the country as a means of taking care of the surplus production of war gardens. They are a logical development of the present war emergency, necessitating conservation of food, of fuel of labor and of energies. A number of successful kitchens were operated in New York State last year, but plans are under way for the operation of kitchens in every part of the state after a local survey has been made to determine the amount of material to be canned, the number of families who wish to use the kitchen, the amount of canned products still on hand from last year, and other questions pertinent to the operation of a successful community kitchen. The impetus in each case was within the community.

The Government estimate of the cost of a complete modern community canning outfit is $300 to $600. The Manhasset, N. Y. kitchen, however, was equipped for $241.62 and was in operation from June 12 to October 10. The help was voluntary.

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PRACTICAL LESSONS IN ELECTRICITY

LESSON THIRTY-EIGHT

TRANSMISSION AND DISTRIBUTION OF ELECTRICAL ENERGY

By TERRELL CROFT

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THE REASON why energy is transmitted electrically, particularly where large amounts are to be transmitted over long distances, is that the electrical method is the most, economical, convenient, simple and satisfactory one available for the applications for which it is so widely used.

NOTE.—Energy may be transmitted satisfactorily and in some cases most economically by steam, compressed air, line shafts, belt and rope drives and by similar methods. But it is obvious that any of the methods just mentioned would be wholly inadquate, impracticable and uneconomical for transmitting large amounts of energy over long distances.

A high voltage is, from a standpoint of pure economics, desirable for the transmission or distribution of electrical energy. However, features of safety and utility often render desirable or necessary the use of relatively-low voltages. Why a high voltage is desirable economically will be evident from a consideration of the articles which immediately follow.

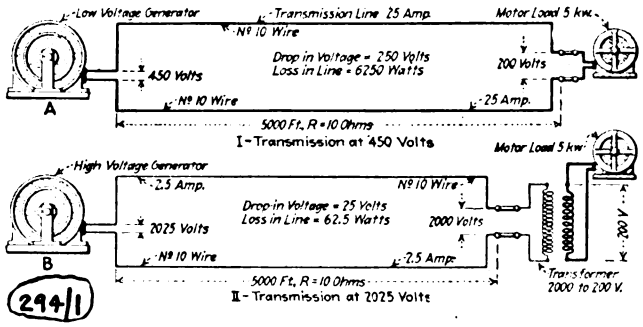


Fig. 1—Advantage of High Voltage Transmission

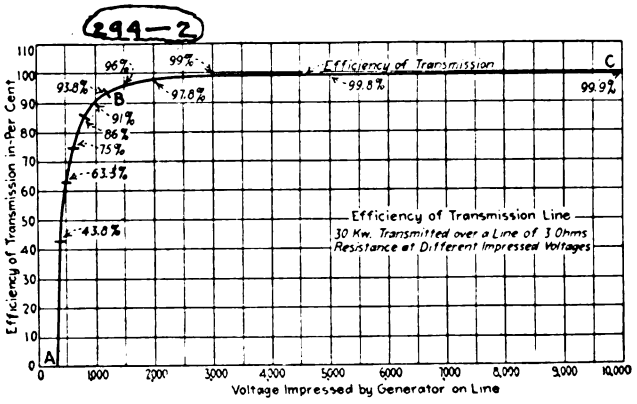


Fig. 2—Graph Showing Increase of Transmission Efficiency with the Transmission Voltage. (The values plotted above relate to the specific problem designated on the squared sheet. Note that the efficiency of transmission increases very rapidly with increase of impressed voltage until the pressure is (at B), about 1,200 or 1,500 volts. Above this pressure efficiency increases much more slowly. Even at C, for a pressure of 10,000 volts, the efficiency is only 99.9 per cent.)

The power lost in an electrical circuit transmitting a given load varies inversely as the square of the impressed voltage, (Certain factors which affect only very-high-voltage, alternating-current lines are disregarded.) If the voltage impressed on a line is doubled the watts line loss—a certain given amount of power being transmitted—will be quartered. If the impressed voltage is trebled the loss will be one-ninth of that with the original voltage. Note the following example:—

EXAMPLE.—Refer to Fig. 1. In both *I* and *II* the same line is shown. It is of No. 10 B. & S. gage copper wire, which has a resistance of approximately 1 ohm per thousand feet, so the entire circuit (10,000 ft. of wire) will have a resistance of about 10 ohms. The load at the end of the line is, in each case, 5 kw. Since the

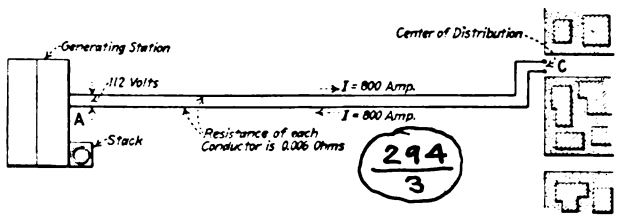
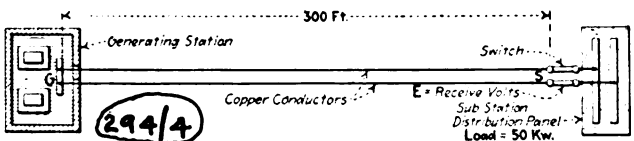


Fig. 3—Example in Computing Efficiency of Transmission.

apparatus at the end of each of the lines is designed for operation on 200 volts, that pressure, approximately, must be maintained at the receiving end of each line.

In system *I*, the motor is connected directly to the line. Hence, the current taken by the motor (which will be:—5,000 *watts* ÷ 200 *volts* = 25 *amp.*) will flow in the line. From the Ohm's law formulas, the voltage drop in the line for system *A* will be:—$E = I \times R = 25 \times 10 = 250$ *volts*. And the power loss in the line will be:—$P = I^2 \times R = 25 \times 25 \times 10 = 6{,}250$ *watts*.

This means that the generator voltage would have to be equal to:—(*volts impressed on receiver*) + (*volts loss in line*) = 200 + 250 = 450 *volts*. Note also that a certain amount of power—6,250 watts—is lost, dissipated as heat, in the line. This necessitates that the generator *A* develop 11,250 watts, 6,250 watts more than is delivered to the motor. Obviously, the transmission



Property	E_1 = 110 Volts	E_2 = 220 Volts
I = Current in the Line	$= \frac{50 \times 1000}{110} = 455$ Amp.	$= \frac{50 \times 1000}{220} = 227$ Amp.
V = Voltage Drop in Line	= 2.5% of 110 = 2.75 Volts	= 2.5% of 220 = 5.5 Volts
R = Resistance of Line	$= \frac{V}{I} = \frac{2.75}{.455} = 0.006$ Ohms	$= \frac{V}{I} = \frac{5.5}{227} = 0.024$ Ohms
Cir. Mils = Area of Wire	$= \frac{22 \times L}{R} = \frac{22 \times 300}{0.006} = 1{,}100{,}000$ c.m.	$= \frac{22 \times L}{R} = \frac{22 \times 300}{0.024} = 275{,}000$ c.m.

Fig. 4—Comparison of 110 and 220-Volt Transmission—Adopted from Gray. (This table shows the solution to a problem where 50 kw. must be transmitted 300 feet with a 2.5 per cent drop and where it is required that the conductor size be known for a receiver pressure of 110 volts and also 220 volts. The resistivity of copper is taken as 11 ohms per circular mil foot. Note that since, with the same per cent line loss and the same load, the conductor area varies inversely as the square of the transmission voltage, the area with E=110 volts is four times that with E=220 volts. In other words, by doubling the pressure the conductor area has been quartered.)

system of Fig. 1—*I* is not an economical one because more power is lost in the line than is delivered to the motor.

Now consider the system of *II* (Fig. 1). The line and the motor are the same as in *I*. However, a transformer, *T*, is inserted at the end of the line. This transformer is so designed that it will "step down" from a pressure of 2,000 volts down to one of 200 volts; or in a ratio of 10 to 1. A high-voltage generator, *B*, is connected to the transmitting end of the line. Disregarding the small losses introduced by the transformer, the current in the line will be:—(5,000 *watts*) ÷ (2,000 *volts*) = 2.5 *amp.*

From the Ohm's law formula, the voltage drop in the line for system *B* will be:—$E = I \times R = 2.5 \times 10 = 25$ *volts*. The power

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loss in the line will now be:—$P = I^2 \times R = 2.5 \times 2.5 \times 10 = 62.5$ *watts*.

The generator voltage would have to be:—2,000 + 50 = 2,050 *volts*. The power loss in the line is now only 62.5 watts. Now note that by increasing the voltage 10 times, from 200 to 2,000 volts, *the line loss was decreased* 100 *times*. This example shows why the power loss in a line varies inversely as the square of the impressed voltage. It was decreased from 6,250 watts to 62.5 watts. The use of alternating current in *B* would make the

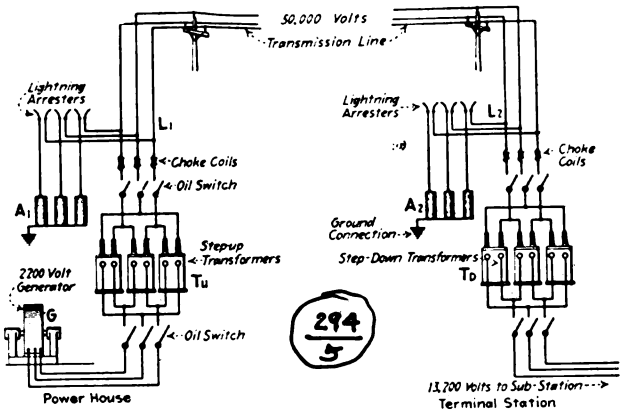

Fig. 5—The Elements of a High-Voltage Alternating-Current Electrical Energy Transmission System

actual results slightly different from those obtained in the solutions above, but the difference would not be of any practical consequence in so far as the general principle described is concerned.

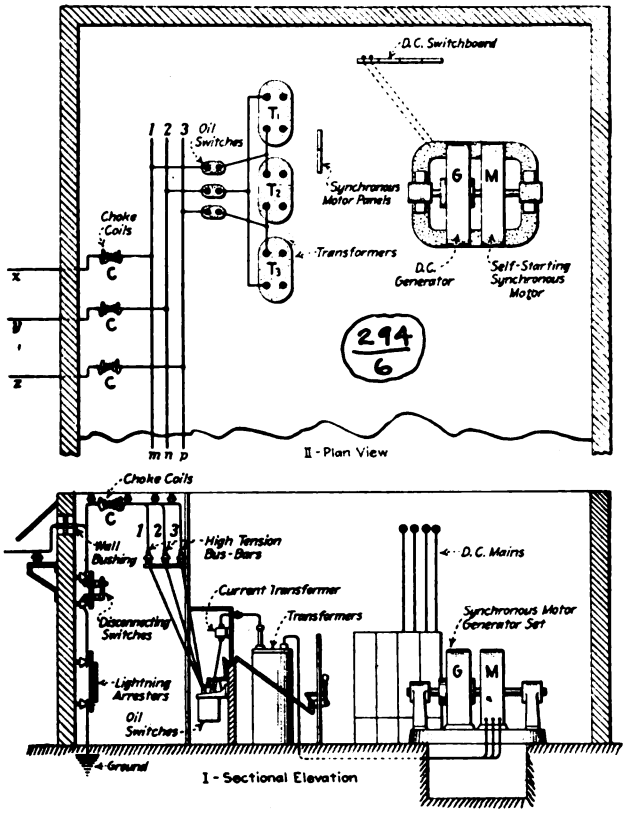

Fig. 6—Typical Arrangement of a Synchronous Motor-Generator Sub-Station

[See the author's AMERICAN ELECTRICIANS' HANDBOOK for an example, tabulated in detail showing the effect of different transmission voltages in transmitting 30 kw. over a line of 3 ohms resistance.

The weight of a conductor is, for a given power loss, inversely proportional to the square of the impressed voltage. The truth of this statement may be readily verified by solving simple examples similar to these above given.

For short transmission distances a high-voltage is seldom desirable because, although the cost of the copper in a transmission line would (with a given watts power loss) be less than if a low voltage were used, there are other considerations which more than offset this cost. With a high voltage, the generator is frequently more expensive. Furthermore, costly transformers, to reduce the voltage at the receiving end of the line must, ordinarily, be used for incandescent lighting and also for motors which are located inside of buildings where a high voltage would be dangerous. In special cases relatively-high-voltage motors may be connected direct to transmission lines of corresponding voltages.

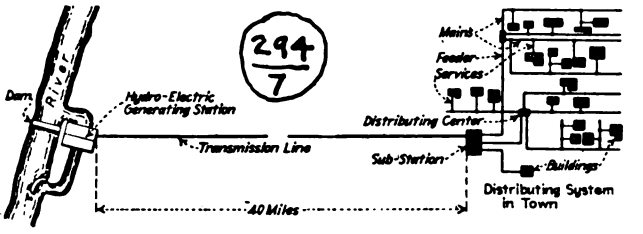

Fig. 7—Transmission Line and Distributing System

The efficiency of transmission of an electrical circuit is similar to any other kind of efficiency in that it is the ratio of output to input. The power delivered at the receiving or far end of any electrical circuit is always less than the power delivered to the

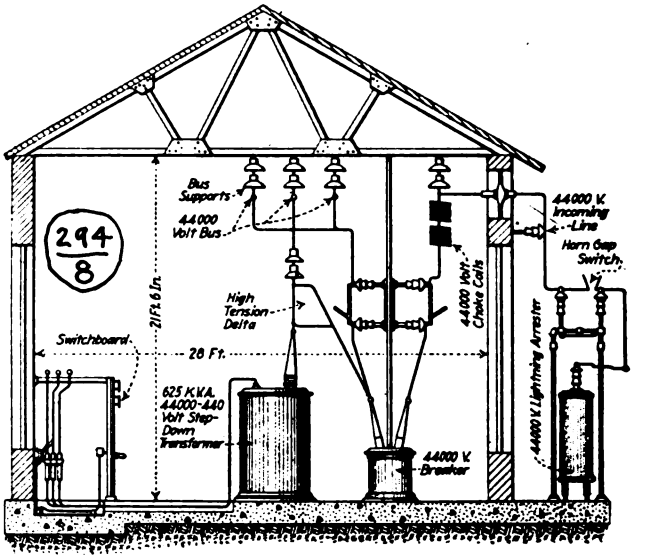

Fig. 8—Typical Transformer Sub-Station

circuit, by an amount equal to the losses in the line. The line loss is almost wholly (and for practical purposes may be considered as being entirely) the $I^2 \times R$ power loss.

NOTE.—Theoretically, by using a sufficiently large conductor, the losses may be reduced to practically zero, that is the efficiency may be increased to almost 100 per cent. But in practice nothing is gained by using an excessively-large conductor. If the conductor is too large, the interest on the money invested in it will more than offset the cost of the energy saved by using the large conductor. In practice transmission circuits are frequently so designed that they are about 90 per cent efficient; that is, the line power loss is about 10 per cent. It is impossible (Fig. 2) to have a circuit which is exactly 100 per cent efficient regardless of how large—of how little resistance—its conductors are. In designing circuits every case should be treated on its merits. See article headed "The Question of Energy Loss in a Circuit" in the author's AMERICAN ELECTRICIANS' HANDBOOK.

To compute the efficiency of a transmission line or circuit, a formula based on the preceding statements may be used. In general:—*efficiency = output ÷ input*. Stating the same thing in

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another way:—*efficiency* = (*output*) ÷ (*output* + *losses*). Now, restating this to apply to a transmission line:—

$$(1)\ \text{Efficiency of transmission} = \frac{\text{Power delivered by line}}{\text{Power received by line}}\ \text{(per cent)}$$

or modified:—

$$(2)\ \text{Eff. of Trans.} = \frac{\text{Power delivered by line}}{\text{(Power del. by line)} + \text{(Power losses in line)}}$$

EXAMPLE.—What is the efficiency of the circuit of Fig. 3 under the conditions there noted? The impressed e.m.f. is 112 volts. The current is 800 amp. The resistance of each line conductor is 0.006 ohm. SOLUTION.—*Power received by the line* = $I \times E$ = 800×112 = 89,600 *watts*. *Power lost in line* = $I^2 \times R$ = $800 \times 800 \times 0.012$ = 7,680 *watts*. Hence, *power delivered by line* = 89,600 — 7,680 = 81,920 *watts*. Now substitute in formula (1):—

$$\text{Eff. of Trans.} = \frac{\text{Power del. by line}}{\text{Power rec. by line}} = \frac{81{,}920}{89{,}600} = 0.913 = 91.3 \text{ per cent.}$$

Direct current for transmission and distribution is, with multiple circuits, ordinarily, suitable only where the distances involved are not great. Direct-current voltages can be "stepped up" or down only by using motor generators which are expensive in first and operating costs. Hence, the economics of the situation dictate that, as a rule, the receivers—lamps and motors—on direct-current multiple circuits must operate at the voltage which is impressed on the circuit by the direct-current generator.

Because of the fact that multiple incandescent lamps designed for operation on, approximately, 110 volts are more economical in first and operating costs than lamps for higher voltages this pressure, 110 volts, is practically standard for incandescent-lighting circuits. Lamps for voltages lower than 110 would of themselves be satisfactory, but the cost of the large conductors which would be necessary to serve low-voltage lamps with energy would be prohibitive. The result is that the pressure on any circuit used for incandescent lighting is, in effect, limited to approximately 110 volts. Obviously this pressure is not sufficiently high for economically transmitting energy over considerable distances.

Relatively-high-voltage direct-current transmission and distribution is satisfactory and economical where the load is mainly power (motors) rather than multiple incandescent lighting. Direct-current pressures as high as 1,500 and 3,000 volts have been applied successfully for electric railway work. In industrial plants 550 volts, direct current, has been used to some extent for motors and cranes; higher voltages are undesirable for general distribution within buildings or plants, because of the danger to human life that they involve.

NOTE.—Voltages lower than 550 may be fatal. Where the contact with the body is good or where the person has a weak heart, a voltage as low as 110 may kill.

Three-wire distribution is now used in practically all installations of any consequence where multiple incandescent lamps are to be served. With the three-wire system, 110-volt lamps may be used on the side circuits while the energy is, in effect, transmitted by the outside wires at 220 volts. Thereby the economics of 220-volt transmission (see Fig. 4) are utilized. The neutral wire may be small where the load on the three-wire circuit is well balanced. The consequence is that the weight of copper conductor required for a three-wire system will be only a quarter to three-eighths of that necessary for an equivalent two-wire system.

Standard direct-current voltages and their applications.

VOLTAGE	APPLICATION
110	Used for multiple circuit, incandescent lighting. Usually obtained from a 110–220-volt three-wire system.
110—220—550	Direct-current motors.
600	Urban and interurban electric railways.
1,200—1,500	Interurban railways.
2,400—3,000	Trunk line railways.

Alternating-current transmission and distribution systems (Figs. 7 and 16) are not, in general, restricted by distance conditions. It is economically feasible to transmit almost any value of power over any reasonable distance with alternating current. Hence, where it is necessary that power be transmitted further than a mile or so or be distributed over a wide area for general light and power service the alternating-current system is always* adopted—because it is far more economical than a direct-current system. The cost of a multiple-circuit, direct-current long-distance transmission and distribution system would be prohibitive.

The reason why alternating current is, in general, preferable for transmission and distribution is that the voltages may be transformed ("stepped up" or "stepped down") with stationary transformers. These transformers are relatively low in cost, and are very efficient in operation. They have no moving parts, hence require no attendance and may be installed out of doors, in manholes or on poles. Hence, energy may be generated at the most-convenient voltage, increased, with a step-up transformer, to a pressure high enough for economical transmission or distribution and then lowered at the distant end of the line, with a "step-down" transformer to a voltage or voltages suitable for effective utilization.

EXAMPLE.—Figs. 5 and 7 show a typical three-phase system. Energy is generated by the alternator G at 2,200 volts. The voltage is "stepped up" by transformers Tu, located in the generating station, to 50,000 volts which is the transmission pressure. The energy is then transmitted at 50,000 volts from the generating station (L_1) over the transmission line for a distance of possibly 2,550 or 100 miles, to the receiving station (L_2). At the receiving station the pressure is stepped down with stationary transformers to 13,200 volts, at which pressure it is distributed to substations, which may be of any one of the four types enumerated below or a combination thereof.

Three-phase transmission is used in preference to single-phase or two-phase because it is more economical of copper*. If a single-phase, two-wire transmission operating at a certain voltage requires a certain amount (or 100 per cent) of copper, an equivalent, two-phase-four-wire transmission will also require 100 per cent. An equivalent three-wire, three-phase transmission will require only 75 per cent of the copper. A four-wire three phase transmission with the neutral the same size as the outers will require only 33.3 per cent.

Standard alternating-current voltages and their applications.

VOLTAGE	APPLICATION
110	Single phase, used for small motors and lighting, usually obtained from a 110–220-volt three-wire system.
110, 220, 440 and 550	Usually three-phase, used for distribution for power for polyphase motors up to possibly 50 to 60 h. p. output.
440, 550 and 2,200 or 2,400 volts	Usually three-phase, used for polyphase motors of capacities greater than about 50 to 60 h. p.
2,300–4,000 volts	For three-phase four-wire distribution in cities. 4,000 volts between outer wires and 2,300 volts between outer wire and neutral.
13,200	Highest pressure for which generator or motors can, ordinarily, be effectively designed. Often better to generate at 2,200 volts and then step up with transformers to transmission line voltage.
6,600, 12,000, 13,200, 20,000 and 25,000	For power transmission over relatively short distances and where cable must be used.
20,000, 25,000, 33,000, 40,000, 44,000, 66,000, and up to 100,000 and 150,000	For long distance power transmission over aerial lines. See "Thousand Volts Per Mile" article below.

*See the author's AMERICAN ELECTRICIANS' HANDBOOK for table showing *Copper Economics of Different Distribution Systems.*

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260. **Foremen**, **Wiremen**, **Electrical Engineers**, **Construction Engineers** — Ohio electrical supplies manufacturing concern can use men in all these branches of the business. Early application requested.

261. **Estimator—Solicitor.** Combination man wanted by New Jersey contracting concern. Must have had practical experience in figuring jobs, closing business, and selling motors. Salary $30 to $50 per week.

262. **Salesmen.** Kentucky electrical supply house can place man in southern territory.

263. **Salesmen.** New York manufacturer wants man to cover New York City and vicinity; not subject to draft, and one who has had experience in selling electrical lines; salary $1200 to $1800.

264. **Estimating Engineer.** Opening with Iowa contracting concern.

265. **Salesman.** New Jersey territory open for capable man; headquarters at Newark; electrical supply line; good salary.

266. **Assistant Purchasing Agent.** Large electrical specialty manufacturer will pay $80 to $125 for man familiar with materials used in electrical apparatus.

267. **Central Station Engineer.** Oklahoma interurban railway will pay $100 per month for assistant to chief engineer.

268. **Salesman.** Cincinnati electrical supply house wants men familiar with adjacent territory.

269. **Order Clerk.** St. Paul house wants young man familiar with electrical supply line.

270. **Office Executive.** Attractive opening to take charge of Milwaukee office organization. Salary determined by experience and fitness.

271. **Salesman.** Man wanted for Greater New York.

272. **Sales Engineer.** Western office of large eastern manufacturer is looking for the right man, with both "pep" and experience.

273. **Bookkeeper.** Man wanted who is familiar with Elliott-Fisher billing machine.

274. **Draftsmen**, **Electricians**, **Electrical Engineers** — Large eastern manufacturer wants men in these branches for St. Louis organization.

275. **Salesman.** Eastern manufacturer is looking for right man to cover northern states on commission or split-profit plan, selling incandescent lamps.

276. **Salesman.** Cincinnati opening with large electrical supply house.

277. **Wiremen.** Positions open for several inside union wiremen with Pennsylvania electrical contracting concern.

278. **Electricians**, **Electrical Engineers**, **Estimators**, **Foreman**, **New Business Manager**, **Sales Manager**, **Wiremen** — Men in all these branches needed by a live, growing Ohio contracting organization.

279. **Salesman—Estimator.** Combination man to take charge of fixture wiring and appliance departments of Iowa contracting concern.

280. **Lineman.** $85 per month opening with Connecticut light and power concern. Man must be experienced with 4400 volts.

281. **Draftsman.** Chance for advancement with Philadelphia switchboard manufactnrer.

282. **Wireman**, **Armature Winders**, **Motor Winders**, **Stock-Keeper** — Illinois public service company is in need of all these classes of help.

283. **Salesmen.** Large electrical jobbing house can use one man in Cleveland and one for outside territory; men wanted preferrably under 35 years of age.

284. **Purchasing Agent.** Attractive opening with Milwaukee jobber for man familiar with electrical and mechanica lines.

284-A. **Accountant.** Milwaukee jobbing house will give good salary and chance for advancement to man with ability to make good.

285. **Salesmen.** West Virginia power company is looking for men familiar with sale of current for both lighting and heating, especially for electric ranges.

286. **Engineers.** Shift engineers wanted in Ohio power plant having 7500 K. W. in turbine capacity and 1000 K. W. direct current; $160 per month.

287. **Salesmen.** Machinery house has opening for two salesmen acquainted with electrical equipment, one for Chicago and one for Milwaukee.

288. **Salesmen.** Chicago electrical concern has opening for right man now.

389. **Engineers.** $75 for eight hour shift, in ice, electric and water works; Oklahoma city.

290. **Salesmen.** Detroit electrical supply house can place men for Michigan and Ohio territory

291. **Purchasing Agent.** Personal correspondence solicited by Chicago electrical concern.

292. **Salesmen.** Four attractive territories open with large electrical specialty manufacturer.

293. **Bookkeeper.** Wisconsin electrical jobbing house can use a good, capable man.

294. **Secretary.** Attractive opening for young man with local electrical contractors association in large Ohio city; $125 per month.

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Advertising Managers	3	23–29	H. S.-College	2–8 yrs.	$150–250	Anywhere.
Bookkeepers	2	26–35	High School	5–14 yrs.	$65–100	Anywhere.
Central Station Engineers	3	29–38	H. S.-Univ.	6–18 yrs.	$60–200	Anywhere.
Clerical	3	22–24	High School	2–10 yrs.	$75–125	Anywhere.
Commercial Laboratory Workers	1	29	Tech. School	11 yrs.	.....	Anywhere.
Construction Engineers	3	28–46	H. S.-Univ.	2–27 yrs.	$100–200	Anywhere.
Electricians	1	30	H. S.-Univ.	3 yrs.	$100	Anywhere.
Electrical Engineers	5	30–38	Practical-Univ.	5–12 yrs.	$125–300	Anywhere.
Engineers	5	28–40	Practical-Univ.	5–12 yrs.	$125–300	Anywhere.
Estimators	3	28–36	Practical	9–18 yrs.	$125–160	Anywhere.
Foremen	2	27–34	Practical	9–16 yrs.	$125–160	Anywhere.
General Managers	3	31–38	Practical	7–15 yrs.	$250–417	Anywhere.
Linemen	1	22	High School	5 yrs.	$90	Anywhere.
Managers, Commercial Department	2	34–35	Practical	12 yrs.	$250	Anywhere.
Managers, Contracting	2	26–36	College	5–16 yrs.	$125	Anywhere.
Managers, Jobbing House	2	32	College	13 yrs.	$2,400-10,000	Anywhere.
Managers, Office	3	26–34	High School	8–10 yrs.	$100–250	Anywhere.
Managers, Plant	11	30–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere.
Managers, Traffic	1	53	Practical	15 yrs.	$200	Anywhere.
Manufacturers Representatives	4	36–38	Practical-Tech.	8–10 yrs.	Com.–$200	Anywhere.
New Business Managers	2	29–34	H. S.-Univ.	9–15 yrs.	$125–175	Anywhere.
Office Executives	2	25–32	Grade-Univ.	4–18 yrs.	$85–150	Anywhere.
Power Salesmen	1	36	Tech. Grad.	12 yrs.	$200	Anywhere.
Purchasing Agent	6	24–41	Grade-Tech.	4–21 yrs.	$125–200	Anywhere.
Sales Engineers	3	39–45	College-Univ.	9–20 yrs.	$100–200	Anywhere.
Sales Managers	6	28–41	H. S.-Univ.	4–17 yrs.	$150–300	Anywhere.
Salesmen	27	24–43	H. S.-Univ.	2–25 yrs.	$75–300	Anywhere.
Superintendents	10	28–44	H. S.-Univ.	3–15 yrs.	$125–300	Anywhere.
Telephone Engineers	1	35	H. S.-Tech.	15 yrs.	$200	Anywhere.
Welder (Acetylene)	1	33	High School.	5 yrs.	$150	Anywhere.
Wiremen	2	23–25	High School	7–9 yrs.	$75–125	Anywhere.

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COLLIER, RAWSON, Po. 4458, care Georgia Railway & Power Co.....Atlanta

IDAHO
KIERSTED, EARNEST C., Po. 10258, care Idaho Power Co.....Twin Falls

ILLINOIS
SPAKE, L. C., Po. 15397V, care Western Editor McGraw-Hill Publishing Co..Chicago

INDIANA
LEE, WALLACE O., Po. 11440, care Indianapolis Light, Heat & Power Co.Indianapolis

KENTUCKY
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville

LOUISIANA
PORTEOUS, W. A., Po. 9226, care Western Union Telegraph Co.....New Orleans

MASSACHUSETTS
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston

MICHIGAN
CAVANAUGH, J. A., Po. 11199, care Benton Harbor & St. Joe Ry. Co..Benton Harbor

MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA
VILETT, W. H., Po. 3675V, care Sterling Electric Co.....Minneapolis

MISSOURI
JOHNSON, FRED, Po. 177V, care Wagner Electric Manufacturing Co...St. Louis

NEBRASKA
ZIMMAN, I. B., Po. 1411, care Omaha Electric Light & Power Co.....Omaha

NEW HAMPSHIRE
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston Mass.

NEW JERSEY, DELAWARE
HOWLETT, C. A. S., Po. 279.....Elizabeth

NEW MEXICO
SHEPARD, J. A., Po. 16106, care Deming Ice & Electric Co.....Deming

NEW YORK
HINES, E. G., Po. 16222, care Electrical World, 239 West Thirty-Ninth St.New York

OHIO
P. B. ZIMMERMAN, Po. 7305V, care National Electric Lamp Association, Nela Park.....Cleveland

OKLAHOMA
MCCALLUM, CHARLES, Po. 3394, care Western Electric Co.....Oklahoma City

PENNSYLVANIA
CRISS, GEO. H., Po. 3364.....Pittsburgh

RHODE ISLAND
DAVENPORT, E. R., Po. 8019, care Naragansett Electric Light Co.....Providence

SOUTH CAROLINA
FULLER, W. W., Po. 16462, care Isle of Palms Traction Co.....Charleston

TENNESSEE
WATSON, C. J. R., Po. 2131V, care Electric Supply Co.....Memphis

TEXAS
CLARK, HIRAM O., Po. 6629, care Houston Lighting & Power Co.....Houston

UTAH
TALMADGE, CHARLES H., Po. 1431, care Western Electric Co.....Salt Lake City

VERMONT
LARRABEE, E. E., Po. 1145, care Twin States Gas & Electric Co.....Bennington

VIRGINIA
SEILER, GUY E., Po. 7479, care Virginia Railway & Power Co.....Richmond

WEST VIRGINIA
POWERS, W. R., Po. 2784, care Consolidated Heat, Light & Power Co...Huntington

WISCONSIN
GOLIN, CARL, Po. 12385V, care Northwestern Storage Battery Co.....Milwaukee

PROVINCE OF ALBERTA
RICHARDS, NORMAN S., Po. 8985, care Northern Electric Co.....Calgary

PROVINCE OF MANITOBA
SCHUMACHER, J. H., Po. 1742, care Schumacher-Gray Co., Ltd.....Winnipeg

PROVINCE OF QUEBEC
HYDE, E. N., Po. 1614, care Northern Electric & Manufacturing Co...Montreal

FIRST AND SECOND TRIBUNES

ALABAMA
MATTHEWS, H. W., Po. 4476, First Tribune, care Burgoon-Matthews Electric Co.....Birmingham

ARIZONA
*HOWLAND, JOHN, Po. 18686, First Tribune, care Globe Light & Power Co....Globe

ARKANSAS
RUSH, J. C., Po. 1556V, First Tribune, care Rush Bros.....Hot Springs
(*Nicholas Lund, Po. 17257, Second Tribune)

CALIFORNIA
*FAGG, J. H., Po. 12212, First Tribune, care Pacific Gas & Electric Co....Stockton
(*A. F. Flanagan, Po. 12213, Second Tribune.)
GOULD, T. A., Po. 18057, First Tribune, care Redondo Home Telephone Co.....Redondo Beach
*LANDIS, H. G., Po. 288, First Tribune, care Landis Electric Co., 941 8th St., San Diego
(*H. B. Steventon, Po. 14643, Second Tribune)
(R. C. Cavell, Po. 14627, Second Tribune)
(Henry Mellman, Po. 9392, Second Tribune).....Oakland
*NIGHTINGALE, E. L., Po. 18072, First Tribune, care General Electric Co., 724 Spring St.....Los Angeles
(F. J. Airey, Po. 1266, Second Tribune)
*ROWE, A. E., Po. 995, First Tribune, care Telephone Electric Co.. .....San Francisco
*(Edwin R. Brown, Po. 7715, Second Tribune)
*TOBEY, J. O., Po. 12226, First Tribune, care Pacific Gas & Electric Co.....Sacramento
*(H. F. Schultz, Po. 14914, Second Tribune)

COLORADO
*BURNITE, T. B., Po. 3426V, First Tribune, Boston Bldg.....Denver
(*H. S. Sands, Po. 1708, Second Tribune)
PAUL, CLARENCE M., Po. 4942, First Tribune, care Trinidad Gas & Electric Supply Co.....Trinidad

CONNECTICUT
*LOUWIEN, H. A., Po. 19696, First Tribune, care Danbury & Bethel Gas & E. I. Co.....Danbury

DELAWARE
*SHELTON, H. E., Po. 14400, First Tribune, care Wilmington & Philadelphia Traction Co.....Wilmington

DISTRICT OF COLUMBIA
*CARROLL, H. R., Po. 1794, First Tribune, 714 Twelfth St.....Washington

GEORGIA
(Geo. E. Watts, Po. 12482, Second Tribune).....Atlanta

IDAHO
DOVERY, C. G., Po. 10241, First Tribune, care Idaho Power Co.....Twin Falls
(J. O. Blackstone, Po. 15318, Second Tribune)

ILLINOIS
BAUM, B. E., Po. 19260, First Tribune, care Vermillion County Telephone Co.....Danville
BROWN, EDWIN C., Po. 5278, First Tribune, care Galva Electric Light Co...Galva
(Chas. E. Broderick, Po. 1154, Second Tribune).....East St. Louis
GREEN, WM. A., Po. 13279, care Green Electric Co., 315 South Jefferson St...Peoria
(Jas. R. Downs, Po. 13277, Second Tribune)
KETTRON, C. W., Po. 16416, First Tribune, President, Illinois Elect. Porc. Co.....Macomb
(James R. Massey, Po. 8939, Second Tribune).....Springfield
MORSE, CHESTER A., Po. 14611, First Tribune, care Central Public Illinois Service Co.....Mattoon
(Donald R. Truax, Po. 14617, Second Tribune)
*NELSON, A. L., Po. 15384, First Tribune, care Commonwealth Edison Co..Chicago
(*W. H. Colman, Po. 3040V, Second Tribune.)

INDIANA
HARRIS, A. B., Po. 14154, First Tribune, 570 Washington St.....Gary
*LOUTH, M. E., Po. 16419, First Tribune, care Globe Stove & Range Co...Kokomo
*VICTOR, H. R., Po. 4857, First Tribune, care Varney Electrical Supply Co., 235 South Meridian St.....Indianapolis

IOWA
*ABELL, C. S., Po. 3952V, First Tribune, 419 Main St.....Keokuk
FLACK, FRANK W., Po. 13979, First Tribune, care Iowa Ry. & Light Co..Coon Rapids
MCINNERNEY, B., Po. 1400, First Tribune, care Kimball Bros. & Co..Council Bluffs
(E. S. Damon, Po. 1398, Second Tribune)
MURPHY, J. E., Po. 15800, First Tribune, care Murphy-Dunham Co..Sioux City

KANSAS
*CARR, J. E., Po. 16506, First Tribune, 446 S. 7th St.....Salina
*(M. L. Derge, Po. 9616, Second Tribune)
HUBBARD, HARVEY B., Po. 17623, First Tribune, care Hubbard Electric Co..Beloit
*MAGRUDER, H. W., Po. 15816, First Tribune, care Liberal Light, Ice & Power Co.....Liberal
*WADSWORTH, W. A., Po. 7249, First Tribune, care Kansas Gas & Electric Company.....Wichita
*WRIGHT, E. A., Po. 15827, First Tribune, care Great Bend Water & Electric Co.....Great Bend

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BERRY, D. EARLE, Po. 8245, First Tribune, care Ruby House .....Owensboro
(C. C. Childers, Po. 15494, Second Tribune).....Louisville

LOUISIANA

JOUBERT, W. C., Po. 16467, First Tribune, 409 Main St.....Baton Rouge
*LEVY, FERDINAND, Po. 6696, First Tribune, care Interstate Electric Co., New Orleans
(T. N. Lide, Po. 3925, Second Tribune)
*SWANN, L. A., Po. 2730-100, First Tribune, care Lake Charles Railway & Light Company.....Lake Charles
(*J. A. Landry, Po. 127, Second Tribune.)
WILLIAMS, J. A., Po. 5053, First Tribune, care Southwest Gas & Electric Co.....Shreveport
(H. E. Cahn, Po. 13025, Second Tribune)

MARYLAND

(Stanley B. Prather, Po. 1650, Second Tribune).....Baltimore

MASSACHUSETTS

(Kurt R. Sternberg, Po. 7612, Second Tribune).....Springfield

MICHIGAN

*AVIS, C. J., Po. 10086, First Tribune, care Southern Michigan Light & Power Co.....Morenci
*BURCHARD, C. A., Po. 19049, First Tribune, care B. H. & St. Joe Ry. & Light Co.....Benton Harbor
(*Earl Frakes, Po. 15528, Second Tribune)
*CUDAHY, J. D., Po. 16321, First Tribune, care Consumers Power Co....Kalamazoo
(*L. W. Brown, Po. 16319, Second Tribune.)
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St.....Traverse City
MCCLOY, A. S., Po. 11051, First Tribune, care Stevenson Hotel.....Detroit
(J. T. Pearson, Po. 11210, Second Tribune)
*MARBLE, CHARLES M., Po. 13961, First Tribune, 67 College St.....Battle Creek
(*L. R. Greusel, Po. 10918, Second Tribune)
SCHAGANE, P. F., Po. 13871, First Tribune, 617 South Saginaw St.....Flint
(L. G. Copeman, Po. 7219, Second Tribune)
*THORNE, JOHN J., Po. 14749, First Tribune, care Throne Electric Co.....Bay City
(*Samuel Ball, Po. 19542, Second Tribune.)
*TROMBLEY, GEORGE, Po. 14750, First Tribune, care Trombley Electric Co., 130 N. Jefferson St.....Saginaw
(*A. B. Brow, Po. 14737, Second Tribune, 228 South Weadock Ave).....Saginaw
WATSON, GEO. H., Po. 12848, First Tribune, care Consumers Power Co., 124 Monroe St.....Grand Rapids
(R. H. Vandermass, Po. 16484, Second Tribune)

MINNESOTA

*ANDERSON, EMIL, Po. 7805, First Tribune, 239 Plymouth Building....Minneapolis
(*Paul Joyslin, Po. 1254, Second Tribune.)
*GRIMES, W. A., Po. 761, First Tribune, care Northern Electric Co.....Duluth
(*F. A. Johnson, Po. 8192, Second Tribune)

MISSISSIPPI

*BRANDLI, H. E., Po. 15617, First Tribune, care Meridian Light & Power Co.Meridian
(*Chas. M. Rogers, Po. 14485, Second Tribune)
GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co.....Gulfport
*MCANGE, W. N., Po. 16854, First Tribune, care Southern Telephone & Telegraph Co., Telephone Building.....Corinth
NEWBILL, HOMER J., Po. 16855, First Tribune, Box 413.....Tupelo

MISSOURI

*BARBER, A. D., Po. 1850, First Tribune, care Western Electric Company.....Kansas City
*BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co.....Marshall
(G. E. Michel, Po. 9061, Second Tribune).....St. Louis
FOX, CHAS. D., Po. 18163V, First Tribune, care City Light Plant.....St. Joseph
(S. W. Beale, Po. 6840, Second Tribune)
(*A. D. Barber, Po. 1850, Second Tribune.)
(A. M. Grall, Po. 4112, Second Tribune).....Joplin
*NIENHAUS, J. V., Po. 19219, First Tribune, care Perry County Public Utilities Co.....Perryville
*WALKER, A. H., Po. 17669, First Tribune, care Walker-O'Byrne Electric Co.....Springfield

NEBRASKA

BURLEY, W. B., Po. 10291, First Tribune, 318½ West Koenig St.....Grand Island
(J. D. Whitmore, Po. 1409, Second Tribune)

NEW JERSEY

ALEXANDER, JOHN P., Po. 11892, First Tribune, Broad St. Bank Bldg....Trenton
COX, W. A., Po. 18960, First Tribune, care Public Service Electric Co...Newark
FEY, W. E., Po. 10120, First Tribune, care Diehl Manufacturing Co..Elizabeth
*PURINTON, A. J., Po. 9643V, First Tribune, care Atlantic City & Shore Ry. Co.....Atlantic City
(*Wm. Bach, Po. 14191, Second Tribune)
STORTZ, H. W., Po. 16450, First Tribune, care Edison Storage Battery Co..Orange
(J. B. Renwick, Po. 16445, Second Tribune)

NEW MEXICO

*HICKS, A. C., Po. 17978, First Tribune, care Albuquerque Gas & Electric Co.....Albuquerque
*ROBERTS, E. A., Po. 17980, First Tribune, care Public Utilities Co.....Carlsbad
SMITH, JAMES R., Po. 16107, First Tribune, care Raton Electric Light & Power Co.....Raton

NEW YORK

C. C. MacKenzie, Po. 2029, Second Tribune).....Syracuse
BURNS, JOHN H., Po. 870, First Tribune, care McCarthy Bros. & Ford, 41 Eagle St.....Buffalo
(L. F. Philo, Po. 774, Second Tribune)
*PELZ, GEO. V. W., Po. 18674, First Tribune, care New York Telephone Co., 109 West 125th St.....New York
*(W. J. Moore, Po. 3136, Second Tribune).....New York
*RUSSELL, R. E., Po. 5561, First Tribune, care General Electric Co....Schenectady

NORTH CAROLINA

JONES, WM. T., Po. 5685, First Tribune, P. O. Box 405.....Fayetteville
SPEAKE, CHAS. L., Po. 16393, First Tribune, care Westinghouse Electric & Manufacturing Co.....Charlotte
*SPENCER, G. L., Po. 11366, First Tribune, 713 Chestnut St.....Greensboro
(*R. H. Milton, Po. 11371, Second Tribune)

OHIO

*ALLIS, CLARENCE L., Po. 13203, First Tribune, care Wooster Electric Company.....Wooster
BRAUN, W. A., Po. 14652, First Tribune, care Braun Electric Manufacturing Co.....Dover
*BULKELEY, W. V. C., Po. 17998, First Tribune, care Columbus Railway, Power & Light Co.....Columbus
*COCHRAN, J. E., Po. 15898, First Tribune, care Ohio Electric Co.....Lima
*COONEY, JAS. J., Po. 13184, First Tribune, care Toledo Railway & Light Co.Toledo
(*Alonzo W. Roush, Po. 12410, Second Tribune)
CRAIN, CHARLES E., Po. 6946, First Tribune, care Crain-Stuart Co.....Springfield
(Fred J. Green, Po. 6951, Second Tribune)
*DUNNING, R. S., Po. 16471, First Tribune, care Forest City Rubber Co., Cleveland
*FENTON, E. BURT, Po. 18446, First Tribune, care Northern Ohio Traction & Light Co.....Akron
(*A. P. Regal, Po. 19064, Second Tribune)
*FOX, HORACE C., Po. 16361, First Tribune, care Massillon Gas & Electric Company.....Massillon
HENCH, L. W., Po. 7854, First Tribune, care Westinghouse Electric & Manufacturing Co.....Youngstown
(E. A. Sanders, Po. 9666, Second Tribune)
HURD, WILLIAM P., Po. 9798, First Tribune, care Northwestern Ohio Light Company.....Van Wert
(*Samuel E. Ringgold, Po. 10995, Second Tribune.)
LOEWE, P. M., Po. 3942, First Tribune, care Oberlin Gas & Electric Co..Oberlin
MILLER, E. G., Po. 13108, First Tribune, care Warren & Niles Telephone Co..Warren
(Marshall, W. J., Po. 10001, Second Tribune.)
PARKER, HERBERT L., Po. 905, First Tribune, care Conneaut Metal Works Co.....Conneaut
*ROHRBAUGH, C. L., Po. 18450, First Tribune, 1211 Carr St.....Sandusky
(*R. C. Beebe, Po. 18442, Second Tribune.)
(J. D. Witner, Po. 14412, Second Tribune)
*SELLS, J. F., Pc. 8979, First Tribune, care Mansfield Electric Light & Power Company.....Mansfield
SIMS, E. A., Po. 5968V, First Tribune, care Avery-Loeb Electric Co.....Newark
(F. C. Morrison. Po. 18630, Second Tribune)
SMITH, E. B., Po. 10596, First Tribune, care Coshocton Gas Co.....Coshocton
*VAN WINKLE, FRANK D., Po. 12966, First Tribune, care Post Glover Co..Cincinnati
(*L. E. Trotter, Po. 3510, Second Tribune.)

OKLAHOMA

*COREEN, O. K., Po. 19827, First Tribune, 213 W. First St.....Oklahoma City
(*A. L. Mullengren, Po. 18853, Second Tribune.)
HOWELL, EDWARD, Po. 7896, First Tribune, care Abernathy & Howell, Elks Building.....Shawnee
*RENTCHLER, C. E., Po. 6870, First Tribune, care Enid Electric & Gas Company..Enid
(*Lincoln Beerbower, Po. 1475, Second Tribune.)
*STRASSWEG, FRED A., Po. 19821, First Tribune, care Muskogee Gas & Electric Co.....Muskogee
(*Edgar M. Graham, Po. 19811, Second Tribune)
*WALKER, P. G., Po. 6871, First Tribune, care Tulsa Corporation.....Tulsa
(James M. Kinslow, Po. 16770, Second Tribune.)

PENNSYLVANIA

*FADER, W. L., Po. 2883, First Tribune, care Union Electric Co.....Pittsburgh
(*D. Paul Lockard, Po. 5788, Second Tribune.)
FERREE, L. L., Po. 18865, First Tribune, 1830 Regina St.....Harrisburg
KRISE, W. M., Po. 4823, First Tribune, Manager, Jefferson Electric Co. Punxsutawney
LODGE, JOS., Po. 18869, First Tribune, 157 East Chestnut St.....Lancaster
MURPHY, WALTER R., Po. 14021, First Tribune, care Meadville Telephone Co.....Meadville
(Carl W. Wilks, Po. 10848, Second Tribune)
(W. T. Snyder, Po. 5128, Second Tribune).....McKeesport
REGER, THOMAS E., Po. 4637, First Tribune, 224 Seventh Ave.....Altoona
*ROUNDS, L. B., Po. 14528, First Tribune, care New Castle Electric Co., 19 Washington St.....New Castle
(*J. C. Chestnut, Po. 14873, Second Tribune)

SOUTH CAROLINA

DOUGLAS, JAS. A., Po. 16984, First Tribune, care Municipal Electric Plant. Lake City
(T. A. Brookbanks, Po. 16460, Second Tribune).....Charleston

TENNESSEE

ALLEN, TERRY E., Po., 18838, First Tribune P. O. Box 185.....Jackson
*JONES, GRAYSON, Po. 13782, First Tribune, care Electric Equipment Co., 131 Eighth Ave., North.....Nashville
RUTLEDGE, C. B., Po. 2127, First Tribune, care Bluff City Electric Co...Memphis
(B. F. Myers, Po. 12911, Second Tribune)

TEXAS

*IRVINE, R. J., Po. 6251, First Tribune, care San Angelo Water Light & Power Co.....San Angelo
*COOPER, H. S., Po. 365, First Tribune, care Southwest Gas & Electric Co., 405 Slaughter Building.....Dallas
COPLEY, E. F., Po. 7073, First Tribune, care Central Electric Co.....Waco
(L. B. Gardner, Po. 11390, Second Tribune)
*FROST, F. G., Po. 4015V, First Tribune, care Houston Lt. & Pr. Co.....Houston
*KELSEY, L. M., Po. 11350, First Tribune, care S. W. Tel. & Tel. Co....Galveston
(*WOOTEN, J. H., Po. 20357, Second Tribune)
LARABEE, R. W., Po. 1327, First Tribune, care Southwestern Electric & Machine Co.....El Paso
*MILLER, THOS. L., Po. 8766, First Tribune, 219 Poplar St.....Abilene
MONTGOMERY, JOHN G., Po. 11355, First Tribune.....La Marque
MUNROE, WALTER N., Po. 3085, First Tribune, care Texas Power & Light Co.....Paris
REID, BRUCE, Po. 18290, First Tribune, care Gulf Refining Co.....Port Arthur
(Edward T. Keck, Po. 18284, Second Tribune)
*SCOVILL, F. E., Po. 17, First Tribune, care San Antonio Builders Exch..San Antonio
(*C. G. Matthews, Po. 10662, Second Tribune)
SMITH, GEO. B., Po. 6649, First Tribune, 309 Guadalupe St.....San Marcos — Central Texas League — Lockhart, Luling, Seguin, New Braunfels, San Marcos

VIRGINIA

*LANCASTER, WM., Po. 6594, First Tribune, care Western Electric Co.....Richmond
(Peter Winston, Po. 1546, Second Tribune)
*MACLEARY, H. M., Po. 9725, First Tribune, 707 Washington St.....Suffolk
(*J. E. B. Holliday, Po. 17106, Second Tribune)
*PATRICK, W. A., Po. 19859, First Tribune, care Dupont-DeNemours & Co. Hopewell
(*G. C. Hurst, Po. 8931, Second Tribune)
WOODHOUSE, H. C., Po. 6618, First Tribune, 54 Bank St.....Norfolk

WASHINGTON

(H. B. Pierce, Po. 7235, Second Tribune).....Spokane

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(R. R. Fagin, Po. 9161, Second Tribune)
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WISCONSIN

*BRIGGS, WILFRED, Po. 12382, First Tribune, 18 Portland St.....Fond du Lac
(*John Adams, Po. 12378, Second Tribune)
DEARTH, E. C., Po. 17144V, First Tribune, care Wisconsin & Minnesota Light & Power Co.....Eau Claire
(Holmes Ives, Po. 18253, Second Tribune)
*DUNHAM, A. W., Po. 7352, First Tribune, care Sun Ray Manufacturing Co..Oshkosh
*ENGSBERG, B. C., Po. 15985, First Tribune, care Light and Water Dept..Lake Mills
*PFEIFER, JOSEPH W., Po. 10981, First Tribune, care Henry Newgard & Company.....Milwaukee
(*W. R. Patton, Po. 1090, Second Tribune.)
LINKER, P. R., Po. 14302, First Tribune, care Wisconsin-Minnesota Light & Power Co.....La Crosse
(Dan. Whalen, Po. 16022, Second Tribune)
TESSIER, LEONARD, L., Po. 18823, care De Pere Electric Light & Power Co..De Pere
*SCHEURMANN, A. R., Po. 17653, First Tribune, 8 Main St.....Watertown
(*Walter O. Wickler, Po. 20000, Second Tribune)

CANADA

ALBERTA

(David Conn, Po. 11885, Second Tribune).....Lethbridge

MANITOBA

*HENRY, J. S., Po. 5994, First Tribune, 152 Gary St.....Winnipeg
(*G. J. Brown, Po. 5977, Second Tribune)

ONTARIO

*BRADLEY, J. M., Po. 13203, First Tribune.....Iroquois Falls
(C. B. Deeks, Po. 17101, Second Tribune).....Coniston
COOKE, W. P., Po. 16714, First Tribune, P. O. Box 178.....Port Arthur

SASKATCHEWAN

SANGSTER, A. G., Po. 7496, First Tribune, 820 Fourteenth St., East...Saskatoon

SPAIN

EDDY, H. W., Po. 11105, First Tribune, care Riegos y Fuersa del Ebro S. A. Apartado 491.....Barcelona

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Schenectady, N. Y.—MOHAWK	$1.00	$2.00
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Shreveport, La.—YOURÉE	.....	.....
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Springfield, Mo.—COLONIAL	.....	.....
Tacoma, Wash.—OLYMPUS	.....	.....
Three Rivers, Mich.—THREE RIVERS	$2.00	.....
Tucson, Ariz.—HEIDEL	.....	.....
Vicksburg, Miss.—CARROLL	$1.00	.....
Waco, Tex.—NEW STATE	$1.00	$2.00
Watertown, S. D.—KAMPESKA	$1.00	.....
Watertown, Wis.—NEW COMMERCIAL	$1.00	$1.50
Winnipeg, Man.—ST. REGIS	$1.50	.....
Winona, Minn.—WINONA	.....	.....

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RICHARD F. BEHAN, Po. 9315,
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SIXTH DISTRICT
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Care Electric Service Supplies Co., Atlanta, Ga.

CHARTERED
JOVIAN LEAGUES

Cincinnati	Charter	No. 1
Kansas City, Mo.	"	No. 2
Pittsburgh	"	No. 3
Minneapolis	"	No. 4
St. Joseph, Mo.	"	No. 5
Louisville, Ky.	"	No. 6
Stark County Jovian League Comprising the towns of Massillon, Canton and Alliance, Ohio.	"	No. 7
Tulsa, Okla.	"	No. 8
Eau Claire, Wis.	"	No. 9
Harrisburg, Pa.	"	No. 10
Wichita, Kan.	"	No. 11
Winnipeg, Man.	"	No. 12
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Port Arthur, and Fort William, Ont.	"	No. 15
Oklahoma City	"	No. 16
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Muskogee, Okla.	"	No. 18
Mansfield, Ohio Comprising Richland and Ashland Counties	"	No. 19
St. Louis	"	No. 20
Southwestern Michigan Jovian League Benton Harbor, Michigan	"	No. 21
Watertown (Wis.) Jovian League	"	No. 22
Akron (Ohio) Jovian League	"	No. 23
Wilmington (Del.) Jovian League	"	No. 24
Dallas Jovian League	"	No. 25
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Denver Jovian League	"	No. 27
New York Jovian League	"	No. 28
New Orleans Jovian League	"	No. 29
Houston Jovian League	"	No. 30
Atlantic City Jovian League	"	No. 31
Globe Jovian League	"	No. 32
Trenton Jovian League	"	No. 33
San Antonio Jovian League	"	No. 34

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JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, V. W. Shear, Po. 14399, 609 Flatiron Building.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, R. J. Hadlow, Po. 15530, care Electric Service Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, Edmond D. McCarthy, Po. 589-10, 41 East Eagle Street.

CHATTANOOGA—Wednesday, 12:00 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge, 1900 Continental & Commercial Bank Building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, Joseph C. Bowman, Po. 6275, care H. W. Johns-Manville Company.

CLEVELAND—Regular meeting, Thursday, 12:00 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, R. S. Dunning, Po. 16471. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12:00 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Railway, Power & Light Company.

DALLAS—First and third Mondays, Hotel Adolphus, 12:15 p. m. Secretary, E. E. Roessler, Po. 12128, P. O. Box 1506.

DAYTON—First and third Mondays of each month, 12:00 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Company.

DENVER—Second and fourth Wednesdays, 12:15 P. M., Kenmark Hotel, Secretary, T. B. Bumite, Po. 3426V, 523 Boston Building.

DETROIT—Meetings Saturday, 12:30 p. m., Grill Room, Board of Trade. Secretary, R. J. Kirchner, Po. 5199, care General Electric Company.

EAU CLAIRE—First Monday each month. Secretary, E. C. Dearth, Po. 17144V, care Wis. & Minn. Light & Power Co.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna Street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur Hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Company.

GALVESTON—Meet on call. Secretary, F. G. Cassan, Po. 20343, 521 22nd St.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Company.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Company.

HOUSTON (TEX.) Date later. Rice Hotel, Sec'ry R. S. Daunoy Po. 20073, care Houston Lighting & Power Co.

INDIANAPOLIS—Monday, 12:15 p. m. Secretary, A. H. Smith, Po. 13580, care Ford Motor Car Company, 1315 East Washington Street.

KANSAS CITY—Third Friday each month, 12:15 p. m., Hotel Muehlebach. Secretary, T. R. Harber, Po. 18908, 1500 Grand Avenue.

LA CROSSE—First Thursday each month, Elks Club, 6:00 p. m. Secretary, Dan J. Whalen, Po. 16022, care Thill-Manning-Whalen Company.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Company.

LOS ANGELES—Wednesday, 12:00 m., Jahnke's Tavern, 534 South Spring Street. Secretary, Clifton Peters, Po. 12734, 108 Edison Building.

LOUISVILLE—Tuesday, 12:15 p. m., Hotel Henry Watterson. S. B. Storm, Po. 9781, care General Electric Company.

MANSFIELD—Date and place of meeting from Secretary, H. A. Waite, Po. 16625, care Federal Sign System.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel. Secretary, W. R. Murphy, Po. 14021, care Meadville Telephone Company.

MILWAUKEE—Second Tuesday each month, Hotel Plankington. Secretary, F. V. Ziekursch, Po. 16625, 436 Public Service Building.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second Avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

MUSKOGEE—Secretary, A. E. Farmer, Po. 19809, 544 N. 11th St.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Company.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne Street, New Orleans, La.

NEW YORK—Place and date of meeting from Secretary, F. M. Feiker, Po. 17197, care Electrical World, Tenth Avenue and Thirty-sixth Street.

OKLAHOMA CITY—Monday, 12:15 p. m., Lee Huckins Hotel. Secretary, A. L. Mullergren, Po. 18853, care Berham Engineering Company.

PEORIA—First and third Saturdays of each month, 1:00 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Company.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon Street.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, R. Gray Jones, Po. 16094, care Cutter-Hammer Co.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's Restaurant, Kellog Street. Secretary, J. O. Roser, Po. 10412, care General Electric Company.

RICHMOND—Third Wednesday of each month, Business Men's Club. Secretary, L. E. Walker, Po. 6610, care Western Electric Company.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Company.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto Avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Company.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Ridpath, Po. 7739, 505 Rialto Building.

SPOKANE—First and third Wednesdays of each month, 12:00 m., Davenport's Hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Company.

STARK COUNTY—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

ST. LOUIS—Tuesday, 12:15 p. m., American Annex Hotel. Secretary, Geo. McD. Johns, Po. 9052, Room 401, City Hall.

ST. JOSEPH, MO.—Secretary, W. R. Thomas, Po. 1489, care American Electric Company.

TULSA, OKLA.—Monday, 12:00 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G. Walker, Po. 6871, 18 West Third Street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Company.

WATERTOWN, WIS.—7:00 p. m., last Thursday each month, New Commercial Hotel. Secretary, H. J. Hippler, Po. 20007, care Wis. Gas & Electric Co.

WICHITA—First and third Mondays of each month, 12:00 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Company.

WINNIPEG—Every other Thursday, 12:15 p. m., Fort Garry Hotel. Secretary, C. T. Kummen, Po. 15957, 386 Donald Street.

* * * *

URGES NEED OF NATIONAL TRADE-MARK.

THE NEED of a national trade-mark was urged at the spring meeting of the National Retail Dry Goods Association at Chicago, a special address on the subject being delivered by Chauncey P. Carter, of the Bureau of Foreign and Domestic Commerce, Department of Commerce, who had an important part in drafting the National Trade-Mark Bill now before Congress.

"One reason why a national trade-mark would be of great benefit to the American manufacturers," explained Mr. Carter, "is because there is so much legalized piracy of private trade-marks in foreign markets. The average manufacturer in this country does not consider export business until he has begun to exhaust the possibilities of the home market. In the meantime it never occurs to him that he ought to protect his trade-mark in foreign countries. See what happens, though: A New York exporter purchases some of his products and sends them to a certain country in South America. The buyer there finds that they will sell well and writes back to the New York exporter for an exclusive agency. Naturally, the exporter is not able to give him an exclusive agency nor is he anxious to put him in direct touch with the manufacturer. What does the South American merchant do then? He finds that the manufacturer's trade-mark is not registered in his country, so he takes out a registration in his own name. Some years later the manufacturer decides to enter the export field; he inserts advertisements in export journals and soon secures an order from a reputable concern in that same South American country. The order is accepted and the goods shipped, but lo and behold when they reach their destination they are confiscated and held upon complaint of the other merchant, who cites his trade-mark, registration as proof of his ownership of the mark, also adducing evidence to show that he was the first user of the mark in his country. And he has the law on his side.

"If we had a national trade-mark, owned and protected by our Government, this American manufacturer could outwit the pirate merchant by merely substituting the national trade-mark for his private mark on all shipments to that country."

Other reasons were advanced for the adoption of a national trade-mark, and issue was taken with those who would make the use of such a mark compulsory. The mark should be granted, it was urged, only to the manufacturers of goods that reflect credit on the industries of the country.

It was also pointed out that the measure providing for a national trade-mark was only one of a number now being put in shape and considered by the Department of Commerce with a view to preparing the American manufacturer and exporter to hold his own in the struggle for world trade that is expected to follow the making of peace.

* * * *

WAR FINANCE CORPORATION MAKES FIRST LOAN

THE WAR Finance Corporation on April 25 approved its first loan. It is for $1,000,000, bears interest at 6 per cent per annum, and will run for two years. It was made through two large banking institutions of the Pacific coast to the Northwestern Electric Co., and it made on the notes of the bank secured by first mortgage bonds of the company, and other collateral.

The money is to be used to make extensions and enlargements so that additional electric power may be generated and used in connection with shipbuilding.

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THE JOVIAN

Volume Twelve JULY-AUGUST, 1918 Number Eight-Nine

Wake Up, American Business Men

By EDWARD N. HURLEY, Chairman United States Shipping Board

WITH something like 25,000,000 tons of merchant shipping to be employed inside of two years, the United States Shipping Board feels that it is none too early to look around for cargoes, both in this country and abroad. With the task of building the ships in charge of the Emergency Fleet Corporation, under the leadership of Charles M. Schwab, this function of the United States Shipping Board begins to attain prominence—and that is what the shipping board was originally created for by Congress.

Twenty-five million tons is a lot of shipping. In one voyage these ships would carry all the live stock, dressed meats, packing house products, poultry, game, fish, wool, hides and leather carried on our railroads in one year. In less than five trips they would carry our whole yearly railroad haul of grain, flour, cotton, hay, fruit, vegetables and other farm products; in three and one-half trips all our lumber; in seven trips all our manufactured goods; in sixteen trips all our coal and coke. The total tonnage hauled on our railroads is about 1,200,000,000 tons.

So, amid all his splendid effort in producing equipment to win the war, the American manufacturer must be asked to take thought for tomorrow and think in terms of shipping and foreign trade. This might appear like a distraction now—something which will take the attention from the supreme duty of winning the war. But far from being a distraction, it fits in with war production and war psychology. While our factories and factory employes are building war material today, they are also building foreign trade, if we can only see things whole and make one factor work with another.

When the business man turns his attention to export trade he looks abroad and thinks of foreign customers. But foreign trade actually begins in his own factory. He looks abroad and studies such factors as ocean freights, foreign exchange, export packing, and international salesmanship. If he would look into his own factory first, and study factors close at hand, such as labor turnover, wages, manufacturing costs and efficiency, he would be laying solid foundations for export trade.

In a recent study of factors that make successful, lasting foreign trade, Prof. Taussig places first of all the element of manufacturing "effectiveness," as he calls it, which he defines as a combination of capital, labor, invention, salesmanship and transportation, all working together under first-rate business leadership, to make goods capable of holding markets in competition with the products of other nations. These elements of effectiveness are largely right at hand in our factories—it is not necessary to send anybody abroad to find them. And as an illustration of how nations make mistakes in trying to build foreign trade at the other end, Prof. Taussig shows that real effectiveness in manufacturing almost invariably holds its own against artificial devices for building foreign trade, such as export bounties, special railroad rates on export shipments, cut prices, discriminatory tariffs, etc.

With the bugaboo of cheap foreign labor haunting us in former years, we got into the way of thinking that export trade necessitated some lowering of wages and American living standards. Probably that was crooked thinking before the war. Certainly it is crooked thinking now, for the war is bringing other nations closer to our American standards of wages and living.

True development of foreign trade in our factories means better and better American standards.

In most of the countries of the world there will be a decided shortage of labor after the war. That country will best succeed which protects its workmen by improving their living conditions, guaranteeing a fair return for labor, protecting workmen and their families against accidents and idleness, and making workers better citizens. The country taking those measures will be the country that develops and makes products most economically, and will perform a world service by making goods at the prices fair to other nations.

Nobody has yet suggested sending cheap American soldiers over to France to win the war. Our men at arms are the pick of the country, physically and mentally. We take plenty of time to train them, make them specialists in every branch of fighting. We study them individually to find which are best suited for flying, or signalling, or bombing, or bayonet fighting. We recognize that modern war is a swift game, constantly changing, and that our soldiers must be prepared to learn new trades and new tricks from month to month, and we get ready to teach them these new trades, and also put them in a receptive attitude toward improvements in the fighting game. We feed them like fighting cocks, and spare no expense in clothing them or providing the latest fighting tools.

In the Army and the Navy we have a visible mobilization of man power for results in a foreign country. If we could have the same visible mobilization of man power in our factories for foreign trade it would be a splendid object lesson for those who manage the factories and make the export goods.

To think of cheapness in connection with foreign trade is just as wrong as trying to pin bargain tags on soldiers. Foreign markets are not going to be won or held by cheapened American workers, or bargain methods in American life. As manufacturers, we have got to lay the foundations for foreign trade by going out into our factories and studying labor and costs together. We can sell our export products at reasonable prices by increasing wages along with output, and decreasing the losses caused by labor turnover, untrained workers, spoiled materials and other inefficiency.

Our experience along these lines in the Emergency Fleet Corporation has been most encouraging. With the task of creating new shipyards in a few months, and manning them with several hundred thousand workmen, most of whom came from other trades, we ran into about every difficulty, and problem, and tangle, that could conceivably arise in management. On a large scale we effected an adjustment of man power such as is called for now in preparing the average American factory for the export trade which we will need to keep our ships employed.

To get production at unheard of speed and in record-breaking quantity, we did something simple and fundamental—and thoroughly human. This was nothing more nor less than arranging wages so that, while our workers produced more for us, they were also able to produce more for themselves. We established the rule that a piecework wage rate set by any shipbuilder must stay in force during the period of the war. Any manufacturer who sets a piecework rate, and then reduces that rate if he finds that he has made a mistake against himself, is doing a great injustice to his

(continued on page ten)

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

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Advertising rates on application

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Past Jupiter Fourteen, Indianapolis, Ind.

HENRY L. DOHERTY, Po. 3208-33
Past Jupiter Fifteen, New York City.

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A PATRIOTIC DUTY OF EVERY MEMBER

NOW that the decision has been made to devote the energies of the Jovian Order to the work of promoting the war, the decision is of itself a call to every member of the fraternity and every member of the electrical and allied industries to co-operate.

We do not believe there is a man engaged in the electrical industry who does not realize the benefits that may be brought about by unity of effort, or who does not realize that a greater service can be rendered the nation by having each industry mobilized to its full potential strength, ready to respond to any call that may be issued to it.

Eventually it must come to that. In fact, such a condition is being brought about rapidly by the demands made upon the industries. Individual and partly organized effort is effective to a certain point, but we know the greater efficiency of completely organized effort.

It is also obvious that organizations that divide the various industries are not as effective as organizations composed solely of one industry. Looking at the matter from the standpoint of the Administration, that requires prompt and efficient response to its demands, the very fact that organizations covering each industry exist will simplify its tasks. If the Administration has to go to a dozen different organizations to obtain the material and service it requires from a particular industry, the matter is more complicated than if it had to go to but one.

While it is true the Government has established various departments to co-ordinate the war activity of each industry, the desirability of effecting an organization covering each industry separately to facilitate the work of the department is obvious.

Once the organization is perfected and in operation a great deal of the detail work of investigation and inquiry will be eliminated and a saving of both time and effort will result.

Then, too, such an organization can wield a great influence in speeding up war work in many other ways. There will be the advantage of having the entire membership of the industry quickly responsive to any orders the Government wishes to give, and directed promptly to whatever tasks there are to perform.

That such a service can readily be built up with the Jovian Order as a basis is apparent, as the established Leagues of the Order in every part of the country are now devoting their energies largely to local and national war activities, and the question is merely one of co-ordinating the activities of those bodies through the direction of a central body for war purposes.

This is the task to which the executive body of the Jovian Order will direct its energies, and plans for the establishment of such a directing body will be worked out and submitted at the Annual Convention in October. Members of the fraternity and of the electrical industry in every section of the country will be called upon to assist in the work of bringing the organization to the greatest possible state of efficiency.

It is purely a patriotic movement and therefore the duty of every member of the fraternity who can possibly do so to be present at the convention to participate in it.

PRACTICAL PATRIOTISM
ELECTRICAL DEVELOMENT

Their Why and How Will be Planned

October 24-26, 1918, Dallas, Texas

COME — The Jovian Convention — COME

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WHY NOT MEET A BENEFIT HALF WAY?

JOVIAN MEMBER, we ask you one question. IF YOU ABSOLUTELY KNEW THAT SOME ONE WAS TRYING TO HAND YOU THIRTEEN OR MORE DOLLARS WITHOUT ANY STRINGS TO IT WOULD YOU MEET HIM HALF WAY TO TAKE IT?

We believe you would—that you would be foolish not to take it.

The trouble would be to convince you that the offer was bona fide, and that is just the difficulty with a number of members of the Order who have not subscribed for Jovian ACCIDENT and HEALTH INSURANCE—it's skepticism.

However, you must admit that we are doing everything in our power to convince you that this benefit is an actual one and hand it to you. We have been plugging away here with all the logic and language at our command to convince you that it is a genuine benefit, and that you can save thirteen or more dollars by accepting it.

Why do you suppose we have been so persistent in the matter—for we admit we have been persistent—that we have gone the limit in trying to convince you? We stand ready to prove that there is not one penny profit in the sale of this insurance for the Jovian Order, or for any one connected with the management of the Jovian Order in any manner whatever. Why, then, do you suppose we persist month after month in trying to convince you that this insurance will save you thirteen or more dollars?

THERE IS BUT ONE REASON: **WE KNOW THE OFFER IS BONA FIDE.**

If you could come into the Jovian Central Offices we would show you by irrefutable evidence and comparison exactly why we are so cocksure about it. We would show you exactly what the Jovian policies cover and what they cost; what other policies cover, and **what a great many other policies do not cover,** and what they cost. WE WOULD SHOW YOU THAT A POLICY THAT COVERS YOU AS THOROUGHLY AS THE JOVIAN POLICY DOES WILL COST YOU OVER TWICE AS MUCH AS THE JOVIAN POLICY IF PROCURED IN ANOTHER WAY, and we will show you WHY the JOVIAN POLICY costs you LESS THAN HALF AS MUCH.

These are positive statements, and we stand back of them.

IN ADDITION TO BEING SURE THE INSURANCE WILL SAVE MEMBERS OF THE JOVIAN ORDER MONEY WE WILL SAY THAT IT WILL PAY ANY MAN WHO IS ELIGIBLE TO JOIN THE ORDER JUST TO GET THE BENEFIT OF THIS INSURANCE ALONE.

We stand ready to prove this by a very simple sum in arithmetic.

The saving on a Jovian Accident Policy is thirteen dollars. How much would a prospective candidate save if it cost him five dollars initiation fee and four dollars dues to join the Order to take advantage of it? Four dollars (the first year—nine dollars a year thereafter). Right. If he joins between now and the fifteenth of October, the dues are two dollars; how much will he save? Six dollars, this year. Right again.

This seems very simple, doesn't it? But it is not one whit more simple than the figures that go to show that the saving is actual.

Just drop a line to the Central Office of the Jovian Order and ask for proof.

MEET HALF WAY THE BENEFIT WE ARE TRYING TO HAND YOU.

Hitch Your Win-the-War Ideas to the Jovian Machine at

The Jovian Annual

October 24-26, 1918

PURPOSE OF COMBINING THE JULY AND AUGUST ISSUES OF THE JOVIAN

OWING to the fact that the date of publishing The JOVIAN the twenty-fifth of the month of issue has been found to be impracticable, it has been deemed advisable to change the date of publication so that it will appear on the first of the month of issue instead of the last. For that purpose the July issue has been named July-August.

This does not in any sense mean that an issue has been dropped, but simply that the magazine will carry a date with respect to the hour of appearance in line with that of other periodicals appearing at or near the same time.

* * * *

"FRAUD"

"PROTECTION for any member of our Order against fraud committed from within or without should receive our greatest attention. With this thought in mind I wish to call the attention of our members to the fact that a man by the name of A. N. Lucas has defrauded our company to the extent of about three hundred dollars by representing himself as a vacuum cleaner salesman and solicited orders for us covering a period of about two months.

"His first contracts were all in proper form, but towards the close of his time with us he systematically turned in bogus contracts, and in a number of cases he sold machines outright for cash and pocketed the money, leaving us with the contracts, which represented that the goods were sold on partial payments and would be paid for in the usual manner.

"Lucas is about five feet five inches tall, weighs about one hundred and twenty-five pounds, has dark complexion, talks in a sharp, short, decisive manner, but does not look directly at you when talking. He gave his home address as Mount Clair, N. J. We understand he came to our city representing W. L. Betts Company, World Building, New York.

"We would like to be informed of his whereabouts, and would be glad to have any one telegraph us this information at our expense.

"(Signed) ELECTRICAL SUPPLY COMPANY,
"Per L. W. Burch, Po. 256V,
"Madison, Wis."

* * * *

INCREASED TAXATION NECESSARY

SECRETARY McAdoo's position relative to taxation for the coming year was frankly and positively stated in his letter to Majority Leader Kitchin of the House of Representatives. He wrote in part:

"We cannot afford to rely upon $4,000,000,000 only for taxation, because we shall then have to rely on raising $20,000,000,000 by loans. This would be a surrender to the policy of high-interest rates and inflation, with all their evil consequences.

"If we are to preserve the financial strength of the Nation we must do sound and safe things, no matter whether they hurt our pockets or involve sacrifices—sacrifices of a relatively insignificant sort compared with those our soldiers and sailors are making to save the life of the Nation.

"The sound thing to do unquestionably is to increase taxation, and the increases should be determined upon promptly and made effective at the earliest possible moment."

The Secretary's recommendations briefly are that one-third (estimated at $8,000,000,000) of the cash expenditures to be made during the fiscal year ending June 30, 1919, be provided for by taxation, a real war-profits' tax at a high rate upon all war profits, a substantial increase in the amount of normal income tax upon all so-called unearned incomes, and heavy taxation upon all luxuries.

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JOVIAN

OCTOBER 24, 25, 26,

The Home of the

BORN IN TEXAS IN 1899—A FORTH AN AMBITIOUS BOY— RETURNING IN VICTORIOUS

To be accorded such a welcome as, even in that South will establish a new high mark for all Dixie welcomes keeping with the conservation ideas of the times, but Plans for definite, tangible win-the-war and electrical of the Order. Ample financing on a basis to lighten

YOUR BRAINS

MARK YOUR

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ANNUAL

1918, DALLAS, TEXAS

-Coming Sons of Jove

HEALTHY INFANT — SENT TO MEET THE WORLD IN 1906. MANHOOD IN 1918.

of ever hearty hospitality we know and love so well, of the future. Practical entertainment features, in distinctly Southern in theme and completely unique. development work for the tremendous potential forces the burden on the rank and file of the Order.

ARE NEEDED!

CALENDAR NOW!

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JUNE REJUVENATIONS

MUSKOGEE, OKLA.

COMBINING an outing and Rejuvenation, Muskogee Jovians motored out to Vann's Lake on the afternoon of June 8, for the purpose of taking their victims, the candidates, beyond the call of help. Arriving upon the scene a short time later, they found that all arrangements had been made.

The candidates were taken immediately into a secluded room in the hotel, the blinds were drawn, doors securely bolted, guards stationed and the candidates were summarily dealt with.

The lecture form of the ritual was used by First Tribune F. A. Strassweg, Po. 19821, for the benefit of twelve stalwart members of the Muskogee League.

Only one visitor was present to observe the brave manner in which the candidates stood the ordeal. He was D. L. Becham, Po. 15842. Up to the present time he has not been induced to make a statement concerning what transpired.

Among the prominent candidates subjected to the tests of the glaring heat that sweeps the canyons of Mount Olympus were Geo. H. Wilmarth, vice-president and manager, Muskogee Gas & Electric Company, and B. E. Smith, auditor, Muskogee Gas & Electric Company.

Following the Rejuvenation, the remainder of the afternoon and evening was devoted to boating, fishing, and the banquet held in connection with the Jovіation.

At the conclusion of the affair, taking the expression of all who participated as a barometer, it can only be chronicled as a very successful and enjoyable event.

* * * *

LEAGUE NEWS

Cleveland Announcement was made that the League's committee had raised $102,143.94 for the Liberty Chest. The donations were largely in dimes, nickels and pennies. Among its other activities the committee carried a large flag through the business district of the city and contributions pitched upon it and gathered in by the solicitors who accompanied it amounted to $6,272.36.

The Red Cross Auxiliary of the League acknowledged the receipt of two gifts; one of one hundred celluloid folders to be used in making surgical dressings, contributed by W. P. Palmer, and the other, a dozen pairs of scissors, the donation of W. D. Taylor.

Thursday, June 13, was the last regular luncheon meeting of the season. The newly elected officers of the League were present and were presented. The meetings will be resumed again in September.

* * * *

Chicago A special meeting of the Chicago League was held June 27, the feature being an address by George H. Nickels, a well known insurance man of Chicago. The speaker took for his subject "Why Aims and Objects of the U. S. A. and Allies Will Be Attained."

Discussions of arrangements for the annual outing of the League were indulged in, and H. A. Mott, Po. 17507, former president of the League, was appointed to take charge of the affair. It was also decided to contribute the net proceeds of the outing to some charity, probably the Red Cross.

* * * *

Houston E. A. Peden, Federal Food Administrator of Texas, was the speaker at the luncheon meeting of the Houston League at the Rice Hotel, July 1. He embodied in his address many details and reasons why food should be conserved. So convincing was his address, at its conclusion the members of the League volunteered their services to aid him in furthering food conservation.

Announcement was made that more electrical appliances had been sold in Houston within the past few months than at any similar previous period.

About forty members and guests were in attendance at the luncheon. The regular "Jovian Day" activities, which included page advertisements in the Houston daily papers, was observed.

Wake Up American Business Men.

(continued from page 5)

employes. Profiting by our experience in the shipyards, I should like to see Congress pass a Federal law making it compulsory to keep every piece rate in effect one year. That would protect workers and furnish a real basis for increased production.

We found ourselves confronted with enormous losses and dangerous delays through lack of skill in special trades needed by workers in the shipyards, and also through the cost of labor turnover. To find 100 capable shipbuilders who would stick on the job it was necessary to hire and try, discharge or loose 1,000. Every manufacturer will recognize in these difficulties exactly the difficulties that he himself faces from day to day, and which put excessive burdens of cost upon his products. In the shipyards we got around those difficulties by establishing training centers for the various trades we needed, and also by appealing to the splendid spirit which lies in the average worker. We had to train everybody, from the boy who heats rivets right up—foremen and superintendents, and even executives. Starting with a little nucleus of skilled riveters, caulkers, reamers, carpenters and so forth, we took them out of the shipyard for a time and taught them how to teach their trades to others. Then they went back into the yards to teach green recruits, not in any school or class, but on actual ships, while doing the regular day's work. Under this system it was possible to quickly bring green gangs up to about 80 per cent of the efficiency of skilled workmen. As fast as these men learned their trades, and acquired high earning power under our protected piece rates, they became steady enough, and the costly item of labor turnover began to drop. After that, nothing more was needed but the appeal for patriotic service. We found that the shipworkers would not only stick on the job like soldiers, but that in their inherent spirit as fighters and loyal Americans there was an enormous reserve of man power to draw upon—a reserve capable of meeting every demand and every emergency, with power to spare.

That reserve of spirit exists in every American industry. War has brought it to light where executives can see it and to develop this great reserve for foreign trade is distinctly the executive's job.

To fill our merchant ships with goods after the war and hold our own in foreign markets, we must begin now to mobilize and train our man power in manufacturing along the same broad lines followed in training for military purposes. Wake up, American business men! Begin to study the man power in your own organizations. Not with the Prussian viewpoint, which counts human life its cheapest raw material in both the factory and the fighting line, but with the American viewpoint of decent living, opportunity, humanity, service.

* * * *

ANNUAL ELECTION OF CLEVELAND LEAGUE

THE annual election of officers of the Cleveland League was held in the League clubrooms, Thursday, June 6, the polls being open for voting from 11:00 a. m. until 7:00 p. m. In addition to a luncheon meeting on that date a dinner was held at 6:30 p. m.

Seven new directors were elected from among the sixteen candidates announced for the offices. They were F. C. Maxheimer, H. L. Schneider, P. B. Zimmerman, Po. 7305V, R. S. Mueller, Po. 7290, F. R. DuGuay, Po. 1678, J. M. Smith, Po. 3267, and N. H. Boynton, Po. 5604V.

Following the election of directors, a meeting of that body was called for June 10, and the following officers elected for the ensuing year: President, H. L. Schneider; vice-president, Mathias E. Turner, Po. 2401-31; treasurer, Geo. S. Crane; secretary, Lucille J. Darrah.

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PERSONAL POINTERS

Old friend you may not know
I read about you here,
But of the long ago,
Are reveries held dear,
And as I read your name
It takes me back today
To some old childhood game
That once we used to play.

* * * *

J. G. HORGAN, Po. 6250, formerly connected with the Duluth (Wis.) Edison Company, has been appointed new business manager of the Empire District Electric Company, Joplin, Mo.

* * * *

J. M. DIXON, Po. 13127, is now connected with the Cincinnati office of the Federal Sign System (Electric). Jovian Dixon was formerly with the Louisville, Ky. office of that company.

* * * *

HAROLD H. HERMES, Po. 19898, new business manager, Oklahoma Gas & Electric Company, Oklahoma City, was married Tuesday, April 16, to Miss Kathryn Lynch. We extend congratulations.

* * * *

G. W. MARTIN, Po. 11984, is now superintendent of the Denmark (Wis.) Light & Power Company. He was formerly connected with the De Pere (Wis.) Electric Light & Power Company.

* * * *

B. H. BATTE, Po. 10615, assistant manager of the Utilities Indemnity and Fire Exchanges, St. Louis, Mo., has been promoted to the position of sales manager, with supervision over all salesmen of the company.

* * * *

W. E. HAWLEY, Po. 3860, has become associated with the Penn Electrical Company, Irwin, Pa. He was formerly connected with the switchboard department of the George Cutter Company, South Bend, Ind.

* * * *

V. H. GREISSER, Po. 8585, has been made consulting engineer for the Washington Water Power Company, Spokane, Wash. Jovian Greisser was electrical engineer for the company before his promotion.

* * * *

W. E. HAWLEY, Po. 3860, is now associated with the Penn Electrical & Manufacturing Company, Irwin, Pa. Jovian Hawley was formerly connected with the George Cutter Company, South Bend, Ind.

* * * *

W. A. STACY, Po. 19540, formerly connected with the sales department of the Bryant Electric Company, has recently been appointed to the position of Western manager for that company with headquarters at Chicago.

* * * *

G. H. RICHARDSON, Po. 20218, formerly auditor of the Oklahoma Gas & Electric Company, Dumright division, has been transferred to the auditing department of the company at Oklahoma City. The change is a promotion.

* * * *

JAS. CLARK, JR., Po. 258V, president of the Jas. Clark, Jr. Electric Company, of Louisville, Ky., announces the removal of his Chicago branch offices from 31 North Jefferson St. to 23-27 South Jefferson St., Chicago.

W. F. WELLS, Po. 1915, vice-president of the Edison Electric Illuminating Company, Brooklyn, was elected president of the National Electric Light Association at its recent convention at Atlantic City. Jovian Wells has been actively connected with the N. E. L. A. for a number of years, having served as treasurer, second vice-president and first vice-president. He has been prominently identified with the electrical development of greater New York, since his connection with the Manhattan Electric Light Company in 1897. When the New York Edison Company was formed, he was made one of the district superintendents of the operating department. In 1905 he became connected with the Brooklyn Edison Company as general superintendent, and in 1913 was elected vice-president, general manager and a director of the company.

W. S. HAYTHORNE, Po. 6636, who for several years represented the Electric Appliance Company, at San Antonio, Tex., has resigned and it is understood will shortly enter the manufacturers' agency business at San Antonio.

* * * *

N. C. DRAPER, Po. 18395, manager of the Northern States Power Company, Sioux Falls Division, Sioux Falls, S. D., has recently been elected a member of the executive board for the South Dakota Electric Power Association.

* * * *

WILL C. CAFFRAY, Po. 1999, who has represented the Hart Manufacturing Company in Southern California for the past ten years has recently been made Pacific Coast sales manager for that company with headquarters at Los Angeles, Cal.

* * * *

WILBUR B. DRIVER, Po. 4208, vice-president and general manager of manufacturing of the Driver-Harris Company, Harrison, N. J. has recently resigned. Jovian Driver has not made definite plans for the future but contemplates entering a similar line.

* * * *

R. C. COFFY, Po. 20618, manager of the Sapulpa Electric Company, Sapulpa, Okla., officiated as chairman of a committee which conducted a Red Cross auction sale and street dance in that city June 22. The net proceeds of the campaign amounted to $6,000.00.

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WALTER D. MYERS, Po. 13322, commercial engineer for the Louisville Gas & Electric Company, Louisville, Ky., has been appointed by the War Industries Commission of the Louisville Board of Trade to represent that city's manufacturing plants at Washington.

* * * *

E. S. FRANCIS, Po. 4451, electrical contractor and dealer of Hartford, Conn., has recently moved his place of business from 168 Pearl Street to 272 Asylum Street in that city. Jovian Francis' new quarters are better adapted to his needs, and it is asserted are the best equipped in the city.

* * * *

HARRY L. GRANT, Po. 3222, who has been sales manager of the Chicago branch of the Western Electric Company for a number of years, has been appointed manager of the newly organized Government Department of the company, with headquarters at 463 West St., New York City.

* * * *

R. H. HUDSON, Po. 450, has been elected a director, and vice-president and general manager of the Binghampton Light, Heat & Power Company, Binghampton, N. Y. Jovian Hudson was formerly associated with the General Electric Company, at Philadelphia.

* * * *

J. L. FUGATE, Po. 3886, who was formerly manager of the factory and fixture department of the Capitol Electric Company, Salt Lake City, Utah, is now connected with the William A. Mullins Electric Company, Tacoma, Wash., as sales and factory manager.

* * * *

E. W. P. SMITH, Po. 14580, has become connected with the sales department of the Elliott Electrical Company, of Cleveland. Jovian Smith was formerly city electrician of Cleveland. Prior to his appointment by the city he was consulting engineer for the Elliott company.

* * * *

C. H. HOLDEN, Po. 12795, Detroit, Mich., has been appointed central district manager by Edwards & Company, Inc., New York, with sales offices at 9 South Clinton street, Chicago. Jovian Holden was formerly sales manager for the P. R. Manufacturing Company, Detroit.

* * * *

ALFRED SWEENEY, Po. 19820, assistant general manager of the Cumberland County Power & Light Company, Portland, Me., has been appointed general manager of the Lewiston, Augusta & Waterville Street Railway which is under the control of the Cumberland County company.

* * * *

JOHN W. CARPENTER, Po. 1320, has been appointed general manager of the Dallas, (Texas) Power & Light Company, succeeding Fred M. Lege, Po. 1320, resigned. Jovian Carpenter was formerly president and manager of the Corsicana Gas & Electric Company, Corsicana, Tex.

* * * *

G. C. MARSHALL, Po. 18642, has been made commercial manager of the Ohio River Power Company, at Steubenville, Ohio. He was transferred to that position from the Newark office of the Ohio Light & Power Company, by the American Gas & Electric Company, of which the two former companies are subsidiaries.

* * * *

ALBERT GOLDMAN, Po. 5358, assistant general commercial manager of the New York Edison Company, recently served as parade manager of the Red Cross parade in the Bronx. Nearly 20,000 people participated, including State Guard, Naval Reserve forces, nurses, Girl and Boy Scouts, Y. M. C. A. Police reserves and school children.

FRANK ESPY, Po. 18608, formerly assistant general manager of the American Gas & Electric Company, New York, is now general manager of the Atlantic City Electric Company, Atlantic City. Prior to his connection with the American Gas & Electric Company Jovian Espy was general manager of the Ohio Light & Power Commany, Newark, Ohio.

* * * *

LEON C. WHITE, Po. 1152, superintendent of the electric light and power department of the Twin State Gas & Electric Company, Brattleboro, Vt., has been promoted to the position of superintendent of all departments of that company. Jovian White has been connected with the Twin State company for fifteen years, having entered its service as chief electrician in 1903.

* * * *

BENJAMIN F. EYER, Po. 13800, has recently been appointed manager of the new sales office of the Edison Storage Battery Company in Kansas City, Mo. He has been engaged in the practice of consulting engineer in Kansas City since 1916. Prior to that time he was head of the electrical engineering department of the Kansas State Agricultural College.

* * * *

HARVEY T. O'CONNOR, Po. 16381, who for the past two and one-half years has been connected with the Electric Shop, Youngstown, Ohio, as appliance salesman, is now district appliance salesman for the Union Electric Company, Pittsburgh. Before his connection with the Electric Shop, Jovian O'Connor was connected with the Mahoning & Shanengo Railway & Light Company for sixteen years.

* * * *

FRED M. LEGE, Po. 131-96, has tendered his resignation as manager of the Dallas Power & Light Company, Dallas, Tex., and has become general manager of the Lone Star Gas Company, Fort Worth, Tex. Jovian Lege has been prominently identified with the gas and electric light business in Texas for a number of years. He served in 1912 as president of the Southwestern Gas & Electrical Association.

* * * *

J. VAN BUSKIRK, Po. 19594, until recently sales manager of the Minerallic Electric Company, Chicago, is now Chicago district manager for the Moloney Electric Company, of St. Louis. Jovian Van Buskirk is well known throughout the central-station field of the Middle West, and has been engaged in sales promotion work and electrical activities for a number of years. He is a member of the Chicago Electric-Club Jovian League.

* * * *

PAUL W. KOCH, Po. 10943V, president of the Electrical Sales Engineers, Inc., Chicago, is one of the organizers of a new firm known as Koch & Sandidge, located at 19 South Wells Street, Chicago, which will specialize in labor-saving equipment. The company is acting as sole agent for the Universal Tool & Appliance Company, of Milwaukee, Wis. Jovian Koch will continue as president of the Electrical Sales Engineers Inc.

* * * *

W. K. DUNLAP, Po. 6301, has been appointed general manager of the Westinghouse Electric Products Company, with which the Copeman Electric Company of Flint, Mich., has been merged. The new company will have a factory at Mansfield, Ohio. Jovian Dunlap was, before his appointment to the position, assistant to the vice-president of the Westinghouse Electric & Manufacturing Company, East Pittsburgh.

* * * *

F. M. HAWKINS, Po. 1192, one of the founders of the Crouse-Hinds Company of Syracuse, N. Y., has retired as New York manager of that company to devote his time to personal interests. Jovian Hawkins entered the electrical field in 1883 and was one of the pioneers in the switchboard and panelboard business. He is widely known among electrical supply and construction men throughout the country.

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W. J. Grambs, Po. 447, formerly superintendent of light and power, Puget Sound Traction Light and Power Company, Seattle, Wash., was recently appointed supervisor of the Sea Training Bureau of the United States Shipping Board for the Pacific Northwest. Jovian Grambs entered the Government service September 1, 1917, since when he has been in charge of the navigation schools of the Government in Seattle, Portland, Tacoma, Bellingham and the marine engineering school at the University of Washington.

* * * *

T. H. Bibber, Po. 158V, Twelfth Pluto, has tendered his resignation as sales manager of the Luminous Unit Company, of St. Louis, and on July 1, assumed the management of the New York and Philadelphia territories of that company. Jovian Bibber who has an extensive acquaintance in the East will concentrate his energies towards promoting and extending sales in the territory of the two branches that have been consolidated. He will be assisted by Robert G. Kittle, Po. 11970, manager of sales of the New York office of the company.

* * * *

E. A. Wilcox, Po. 6830V, Twelfth Mars, who for the past two years has been connected with the Public Service Company, of Tulsa, Okla., has recently resigned his position with that company to accept service with the Fuel Administration at Washington, and is connected with the Light & Power Division. Through his Jovian activities, and his techincal works Jovian Wilcox is well known in the electrical industry. The extensive experience he has acquired in the lighting and heating field makes him a valuable asset to the department to which he has been called.

* * * *

Terrill Croft, Po. 13683, author, instructor, and chief electrical engineer Luminous Unit Company, St. Louis, Mo., has been called to Washington to take charge of the work of standardizing the army courses of electrical instruction, in the hundred or more schools throughout the country. The work will consist of, first, visiting the schools on a tour of inspection, and then, in connection with the committee, compiling the most practical and effective course possible. The selection of Jovian Croft for this responsible task is an important step towards making the army courses effectual. His works on electrical subjects are generally regarded as standards, and are being used as text books in the army courses and in a number of universities. In addition Jovian Croft carries to the position an experience that covers almost every phase of the electrical industry, and it is this practical experience that will be of great value in outlining a course that will be the most effective. He has been extended a leave of absence by the Luminous Unit Company while in the government service.

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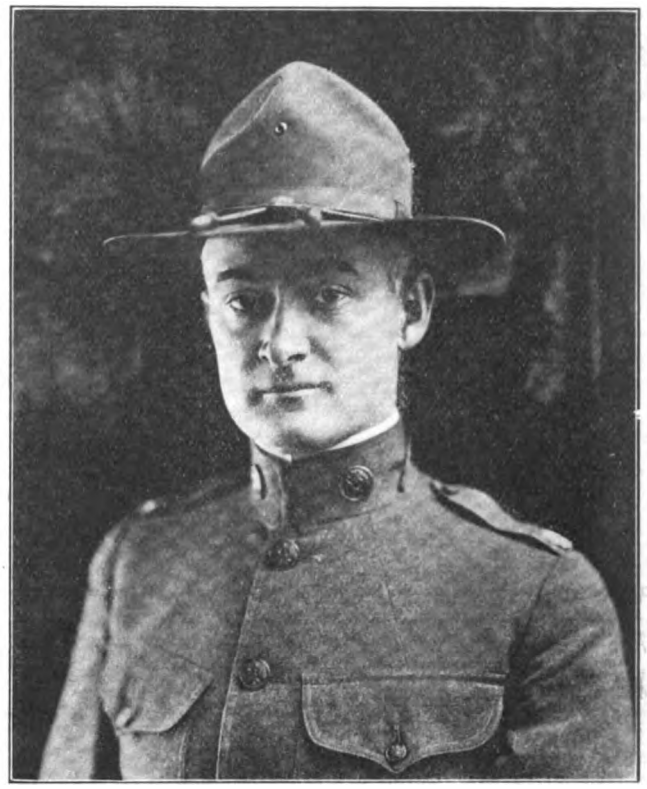

PHOTO GERARD SISTERS, ST. LOUIS

HARRY D. McBRIDE, Po. 13817, on the staff of the operating second vice-president of The Southwestern Bell Telephone Company, St. Louis, Mo., and in direct charge of welfare and industrial betterment work, has successfully passed the examination and been commissioned a major in the Adjutant General's Department, National Army, and has been assigned to the commanding officer, Camp Taylor, Louisville, Ky., in the capacity of Camp Adjutant. Major McBride has been connected with the American Telephone & Telegraph and associate companies for over twenty-four years, having been stationed at Cleveland, Boston, Dallas and St. Louis. During 1904 he became affiliated with the Massachusetts Volunteer Militia, with which he was connected four and one-half years. In 1904 he assisted in organizing The Officers' Training Corps at St. Louis, consisting of about three hundred young business men. During the summer of 1916, as a first lieutenant, he served several months on the Mexican border with the First Missouri Regiment, from which for business reasons he resigned upon its return from duty. In July, 1917, When the military forces of Missouri were again withdrawn for Federal service, Jovian McBride was appointed Lieutenant-Colonel of the First Missouri Regiment of Home Guards, in which capacity he served to July 25 1918, when he resigned to accept the commission as above mentioned. During his commission with the Home Guards he assisted in the examination of the commissioned officers, and in this, in the formation of the regiment and its equipment and instruction, took a leading part which he discharged most efficiently. Major McBride's Jovian interest has been one hundred per cent service since the hour of his initiation into the Order. Ever ready to accept co-operative work for the advancement of Jovianism, he has never failed to "carry on" to the limit of his possibilities in the tasks undertaken. His work as chairman of the entertainment committee of the Jovian Annual Meeting at St. Louis set a mark for ingenuity, completeness and effectiveness that has never been equaled by any similar committee in or out of the Order.

MILWAUKEE JOVIANS HOLD PICNIC—GET OUT ELECTRICAL INDUSTRY DIRECTORY

THE Milwaukee Jovian League held its third annual outing on June 16 at Wulff's Island, in the Upper Milwaukee River. Starting at 10:00 a. m. from the Auditorium, the members and guests went by automobile, accompanied by ladies and children.

This was the first outing of the League in which ladies participated, and proved to be the most enjoyable.

There were numerous games for men, women and children, and a large number of valuable prizes distributed to the winners.

The baseball game was won by a team captained by A. E. Maage, Po. 19977. Frank M. Zieuursh, Po. 16625, was captain of the team that won the tug of war.

The committee in charge of the outing were: H. E. Brauns, Po. 16618, chairman; Charles Brewster, Po. 16618, Carl Golin, Po. 12385V, I. R. Douglas, Po. 18360, A. F. Kiefer, Po. 19976, W. R. Patton, Po. 1090, Geo. J. Kirchgasserand and F. V. Ziekursch, Po. 16625.

In addition to being a most enjoyable affair, the outing proved very successful from a financial standpoint, the proceeds of a good-size net profit being turned into the treasury by the managing committee.

Among other activities of the League, a directory covering the local electrical industry has been compiled and distributed. It is a neat 36-page booklet in which firms and individuals are listed alphabetically, with their affiliations and the line of industry they are engaged in.

Mark Your Calendar Now

October 24-26, 1918, Dallas, Texas

THREE DAYS OF CONSTRUCTIVE DEVELOPMENT

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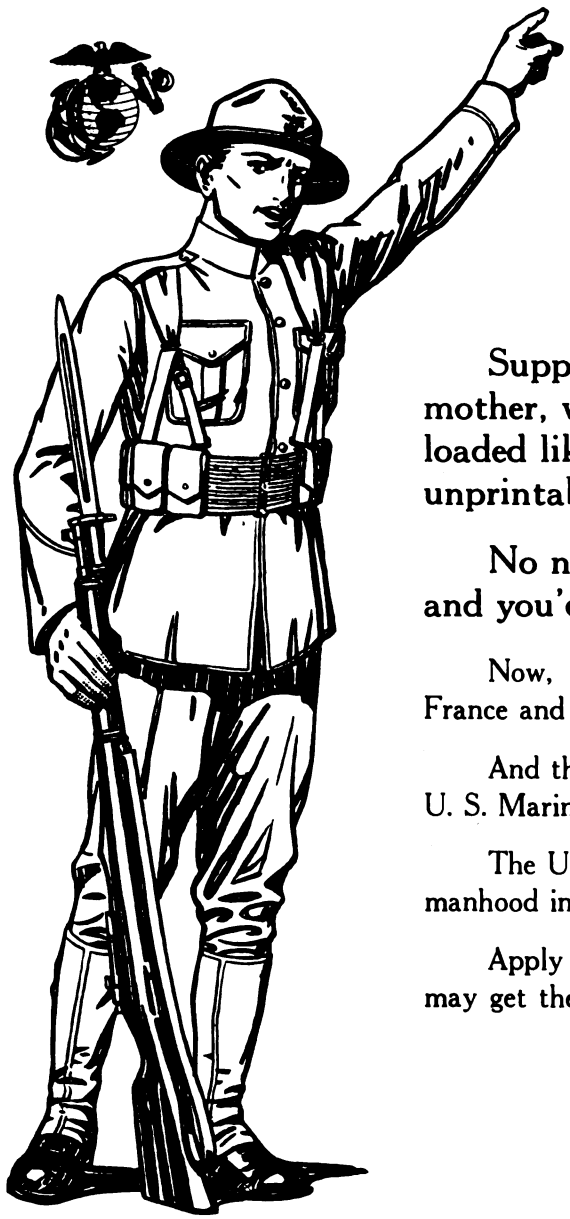
Go Get 'em

with the



U. S. MARINES

You young men!

Suppose an organized gang of ruffians seized your mother, wife, sister, sweetheart! Suppose your women were loaded like swine and shipped out of the country to a fate unprintable!

No need ask what you'd do. You'd just "Go Get 'em", and you'd do it right!

Now, the only difference between YOUR women and the girls of France and Belgium is a matter of miles.

And the only difference between what you WOULD do and what the U. S. Marines ARE doing, is that you haven't enlisted in the Marines—yet.

The U. S. Marine Corps wants more men; they want the fellow with manhood in his soul and "blood in his eye." Age limits, 18 to 36 years.

Apply at the U. S. Marine Corps Recruiting Station. Registered men may get their Local Board's permission to volunteer.

This space is contributed in appreciation of the Grit, Gumption and Glory of the U. S. Marines by

THE

JOVIAN ORDER

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

The Song Within Your Heart

By W. R. J.

Oh, the singing of the heart strings
When you feel your work is right
Is a balm of life's contentment
That will put your cares to flight!
When you feel the task is worthy,
And you strive to do your part
You are sure to hear the music
Of a song within your heart.
While your mind is set on winning
And the laurels you will gain,
While you strive for some objective,
Some high station to attain;
If the task that you are doing,
Whether in the field or mart,
Is to you a true vocation
There's a song within your heart.
Work to some is but a battle—
Many people make it so;
To their tasks they bring contention,
Strife and discord, plot and blow;
And as such 'tis unresponsive
To the joys the tasks impart,
And no thrill of love for labor
Stirs a song within the heart.
Wealth and fame promote endeavor,
And they set in life a goal,
But your work is your creation—
Something closer to your soul.
When you strive to make it worthy
And sincerely do your part
You will get a lot of pleasure
From the songs within your heart.

* * * *

Battles That Never Cease

HABIT

SOMEWHERE back in the stone-hatchet age when flint rocks were used as chisels and turtle shells for soup bowls the thing called Habit attached itself to our forebears.

Just how it got its tentacles around the first species of Homo Genus may only be surmised. It might have got in its work through the concoction of brews from herbs, berries or fruit, or some old bewhiskered ancestor in the course of his experiments might have discovered that smoke could be sucked through a stem. Persisting in his research he may have strayed so far from the environs of the water wagon that he developed an inclination to continue to partake of his invention long after he had perfected it beyond the experimental stage.

Then he became cognizant of the fact that he had acquired a habit.

This premise being purely speculative, it would be merely a hazard to assert how he discovered he had a habit. It might have revealed itself to him some evening when he saw two moons where there should have been but one; he might have discovered it when he attempted to roll the stone entrance aside from the wrong place of habitation some star-light night when he was trying to discover his own domicile. However, basing our deductions on the revelations of history, tradition, and a few experiences we have picked up along the road of life, we will venture to predict the exact way he discovered he had acquired a habit.

His wife told him.

Passing on from the origin and discovery of Habit, we find that man with all of his power has been in a death grapple with the shock forces of Habit ever since. Prominent among the leaders of these shock forces we find Colonel J. Barleycorn, General Extra Dry Bubbles, Private Hop Brew, Chief Long Leaf, Corporal Makings and others.

Being a hand-to-hand fight, there are no limits to the war zone. Over in China old General Habit has the Chink by the cue with one hand while he holds the dope pipe to his mouth with the other. Up in Russia he has the advantage of a whisker hold to lead the Bolsheviki to the vodka trough. He ambushes the kilted Scotchman with a bagpipe and floors him with a highball.

Nor is he at a loss to supply the diversified tanglefoot suitable to the inclinations that prevail in various atmospheres of Uncle Sam's domain. One of Habit's greatest victories, however, was when he got the Irish so badly mixed up St. Patrick had to chase the real snakes out of the country to keep them from getting mixed up with the imaginary ones.

It is therefore very plain that the battle between man and Habit is of perpetual duration. A great philosopher one time remarked: "He who overcomes his habits has attained a great victory in life."

That may be true, but unless he keeps mobilized and his sentinels posted, or old man Gabriel toots his horn for him shortly after he gets General Habit hors-de-combat, the old boy is certain to come back at him with a gas attack or a tank charge when he isn't watching, and start the battle all over again.

That is why we do not hesitate to say that if all the effort engaged in actions on the Habit war front could be released and directed against the Kaiser the war would be over so suddenly that the daily press wouldn't be able to print an account of it for six days after it happened.

* * * *

The Hope Crimper

By W. R. J.

Of all obstructing forces that which often
makes you blue
Is the kind advice that tips you off to things
you cannot do.
When you've laid your plans for action and are
ready to dig in,
Some friendly soul will tell you you had better
not begin.
He will tell you in a knowing way the thing
cannot be done,
Pointing out the opposition into which you're
sure to run,
And it's seldom he's contented just to tell you
you will fail,
But he takes a brief to show you all the things
that will assail.
He assumes the cheerful attitude you do not know
a thing,
And digs into the buried past some precedent
to spring.
Perhaps it was Methuselah who tried to do it once,
And your friend will try to show you why the
old boy was a dunce.
He resorts to facts and figures, turns your
arguments askance,
In his effort to convince that you haven't got a chance.
If you don't give up the project, when he sees
you will not heed,
He predicts your utter failure with a hope
that you'll succeed.
Oh, a fellow may be full of hope, of courage
and of vim,
He may be full of confidence before this friend meets him;
No matter if he's game enough to stand the knocks
that come,
A line or two of cheer like that will cool his ardor some.

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PARTICIPATION IN YOUR ALREADY-P

WHEN you pay your four-dollar annual Jovian dues you are entitled to participate in Jovian Accident and Health Insurance at net cost.

This is a tangible, money-left-in-the-pocket benefit from membership in The Jovian Order, that represents a big annual saving for each individual Jovian. These low, net-cost rates on insurance can be had from no other source and by no one but Jovians.

On no Jovian Policy is the saving less than 75%, and in some cases it ranges as high as 112%. (See the attached tabulation giving cost, saving and percentage of saving.)

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Single Health Policy	
Double Health Policy	
A Single Accident and a Single Health Policy	
A Single Accident and a Double Health Policy	
A Double Accident and a Single Health Policy	
A Double Accident and a Double Health Policy	

* * * *

IN every case, where we have been able to sit down with the individual Jovian and explain this big saving, and make comparison with other insurance, both standard, assessment and traveling men's associations policies, we have succeeded in convincing the interested party of the big value offered him. He instantly became an enthusiastic booster for Jovian Insurance.

It is, of course, impossible to make this personal solicitation of all our membership. However, we are all interested in making our dollars go farther in these troublous times. A line to this office will bring particulars of how to do so in the matter of Insurance.

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it go twice as far in buying

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IF YOU SO DESIRE, DATE YOUR APPLICATION TO TAKE EFFECT WHEN SOME OF YOUR PRESENT INSURANCE EXPIRES — PAY NOT UNTIL YOU RECEIVE THE POLICY.

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OVIAN INSURANCE
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ual ium	Approximate Annual Saving	Per cent of Saving
.00	$13.00	112
.00	26.00	108
.00	15.00	75
.00	30.00	75
.00	28.00	87½
.00	43.00	82
.00	41.00	93
.00	56.00	87½

LIVING EXPENSES NOW COST TWICE AS MUCH AS FORMERLY

BUT

JOVIAN INSURANCE COSTS ONLY ABOUT HALF AS MUCH AS OTHER SIMILAR PROTECTION AT ANY TIME.

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Send me complete information relative Jovian Accident and Health Insurance at greatly reduced rates.

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(Address) .....

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PRACTICAL LESSONS IN ELECTRICITY

LESSON THIRTY-NINE

TRANSMISSION AND DISTRIBUTION OF ELECTRICAL ENERGY

By TERRELL CROFT

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ABOUT a thousand volts per mile length of transmission* is a thumb rule which serves as an index. This is based on the fact that with copper conductor a pressure of a thousand volts per mile, and a current density of 1 amp. per 1000 cir. mils, the energy loss will be about 10 per cent. That is, a line designed on this basis will carry its current without excessive heating at about a 10 per cent loss. For relatively short lines transmitting considerable power the rule provides a conductor too small for most economical operation, that is for minimum annual costs. Hence, for the short distance transmission of much power, a pressure greater than 1000 volts per mile may be the more economical. Where a transmission system serves an extensive distance and the load is small a voltage smaller than "1000 per mile" may sometimes be adopted with economy.

The standard frequency† in the United States may now be said to be 60 cycles. It appears that it is desirable, in practically every case, to adopt this rather than any other frequency. The economics and advantages that were expected to result from the use of 25 cycles for electrical energy transmission have not, in general, materialized. A number of plants which generate at 25 cycles have been constructed which necessitates the installation of 25 to 60-cycle frequency changers where 60 cycles is the utilization frequency.

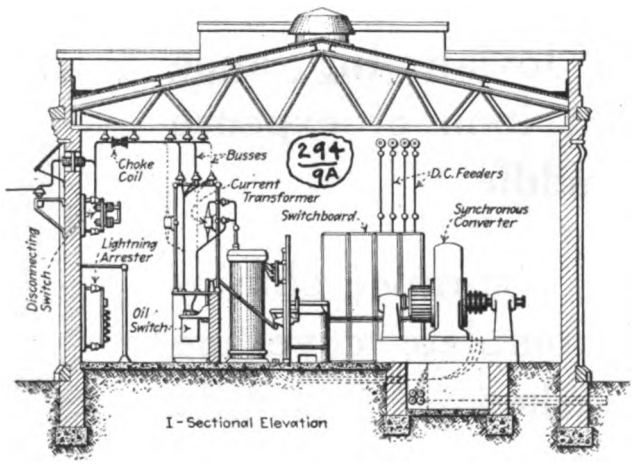

Fig. 9A—Sectional Elevation Showing Typical Arrangement of a Synchronous Converter Substation for Electric Railway Service

NOTE.—Synchronous converters as formerly designed would not operate satisfactorily at frequencies much above 40 cycles. This was one of the reasons for the original installation of a number of 25-cycle generating stations. Motors for 25 cycles are, generally, except very slow-speed machines, more expensive than those for 60 cycles. Arc lights cannot be used on 25 cycles. With incandescent lamps there is a noticeable flickering on 25 cycles which produces eye fatigue. This renders its application undesirable for interior illumination but it can be used for incandescent street lighting.

Substations may, in general, be divided into four general classes:—(1) Transformer substations, (2) Rotary-converter substations, (3) Motor-generator substations, and (4) Frequency-changer substations.

*H. B. Gear.

†See the author's AMERICAN ELECTRICIANS' HANDBOOK, his PRACTICAL ELECTRICITY and his ELECTRICAL MACHINERY for further information on this subject.

The function of a substation equipment is to so modify the characteristics of the energy received by it that the energy will then be suitable for utilization by that load which the substation serves. That is, the voltage may be lowered in the substation and a conversion made from alternating to direct current, if necessary, as will be described. So that each substation may most economically serve its load it should be located at or near the electrical center of the district served.

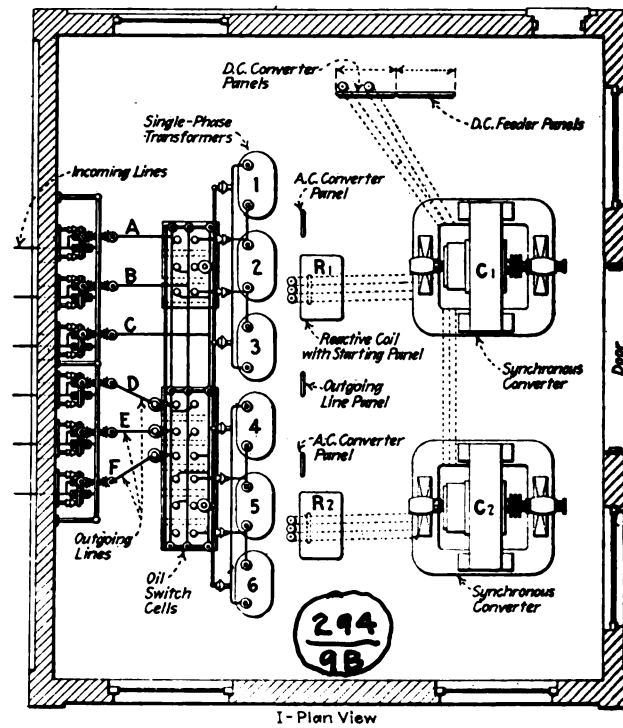

Fig. 9B—Plan View of the Railway Synchronous-Converter Substation

A transformer substation (Fig. 8) is one in which the alternating-current voltage is lowered, with step-down transformers, from the transmission voltage to one suitable for distribution to the consumers or to the power load. Usually the distribution primary feeders operate at 2200 volts. Hence, the low tension side of the step-down transformer develops this voltage. A potential or feeder regulator, which may be automatic or non-automatic, is usually inserted in each feeder to maintain the voltage at the distant end of the feeder practically constant. In a transformer substation the pressure is transformed from one voltage to another but the energy is not converted from alternating to direct current, or the reverse.

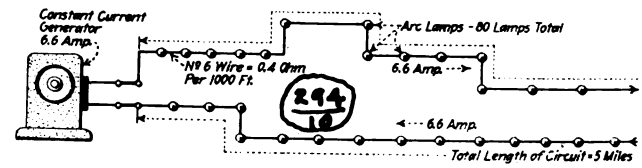
Constant Current Generator 6.6 Amp.
Arc Lamps - 80 Lamps Total
No 6 Wire = 0.4 Ohm Per 1000 Ft.
6.6 Amp.
294 10
6.6 Amp.
Total Length of Circuit = 5 Miles

Fig. 10—Arc Lighting Circuit

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In a synchronous or rotary converter substation (Fig. 9) conversion from alternating to direct current is effected. Usually the voltage must be decreased with a transformer on the alternating-current side of the synchronous converter because there is a certain fixed ratio between the alternating voltage impressed on a synchronous converter and the direct voltage delivered by it. With a single-phase converter, the alternating is 71 per cent of the direct voltage. With a three-phase machine the alternating

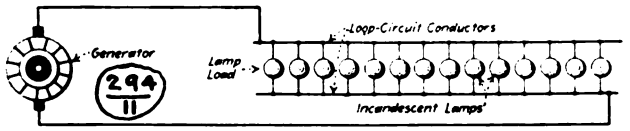

Fig. 11—Diagrammatically Illustrating a Loop Circuit

is 61 per cent of the direct voltage. Hence, to change the direct voltage delivered by the converter, the alternating must be varied accordingly. By changing the field excitation, a converter may be made to correct or compensate for low power factor. The direct e.m.f. impressed on the line by a synchronous converter may be varied by using a booster—a small generator—either in the alternating or direct current side of the machine, or by varying

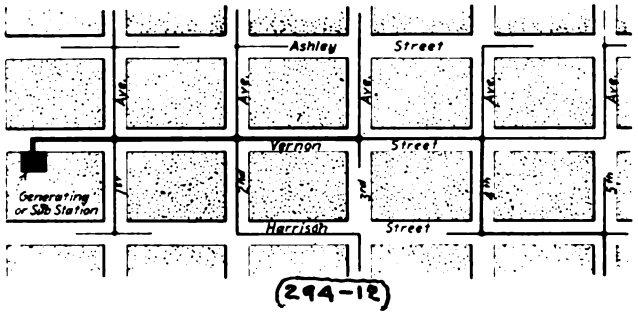

Fig. 12—Showing a Tree Circuit as Applied to Out-of-Door Distribution
(This type of a circuit is called a "tree circuit" because of its resemblance to the trunk and branches of a tree)

the alternating impressed voltage with a potential regulator or a transformer having taps.

NOTE.—Synchronous converters are somewhat more efficient than motor generators. They find their widest application in direct-current street railway service.

A motor-generator substation is shown in Fig. 6—*I* and *II*. Such an outfit may be used, particularly in industrial plants, where direct-current energy is required for utilization. The high-voltage alternating three-phase line enters the station over three wires, *X*, *Y* and *Z*, and passes through the choke coil, *C*, to the high tension bus bars 1, 2 and 3. The line voltage is stepped

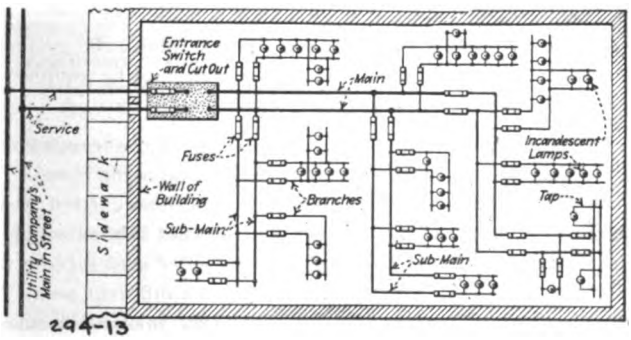

Fig. 13—An Interior Distribution "Tree" Circuit

down to 2200 volts by the three single-phase transformers, T_1, T_2 and T_3, which are connected in delta. The 2200-volt alternating power drives the synchronous motor, *M*, which is mounted on the same shaft with and drives the direct-current generator, *G*. The synchronous motor usually has a squirrel-cage winding on its rotor and is thereby started as an induction motor.* The direct e.m.f. impressed on the line by *G* may be made any reasonable one by providing a generator of suitable characteristics, and it may be controlled manually by a field rheostat or automatically with an automatic voltage regulator. Motor generators are sometimes preferred to synchronous converters because the motor generators are, possibly, somewhat more readily operated. The synchronous converter outfits are the more efficient.

A frequency-changer substation is one in which alternating-current power at one frequency is changed to alternating-current power at different frequency. The frequency-changer substation is somewhat similar to the synchronous-motor substation of Fig. 6 except that the alternating-current generator and its switching

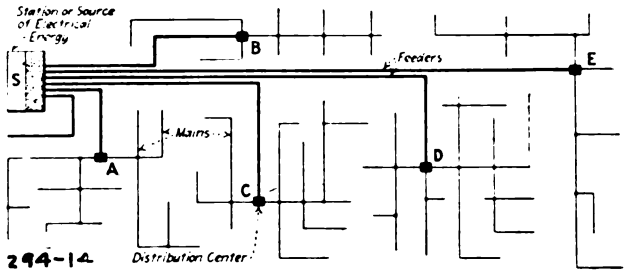

Fig. 14—Example of a Feeder and Main Distribution

and control equipment is replaced by an alternating-current generator and outfit.‖ Frequency-changer stations in the United States ordinarily change from 60 to 25 cycles, or the reverse.

Distribution circuits may for convenience be divided into the following two general classes:—(1) Series circuits (Fig. 10), and (2) Parallel circuits (Figs. 11 to 15). Parallel circuits may be sub-divided into:—(a) Loop circuits (Fig. 11), (b) Tree circuits (Figs. 12 and 13), (c) Feeder-and-main circuits (Fig. 14), and (d) Ring circuits (Fig. 15).

Series distributing circuits (Fig. 10) are seldom, if ever, used in this country except for constant-current† series arc or series incandescent lighting. The constant current in commercial series circuits is so small (usually under 8 amp.) that a small wire will carry it without excessive loss. Hence, conductors for series circuits are usually selected with reference only to their mechanical strength. It is usually considered that No. 6 wire is as small as should be erected on a pole line, hence, a majority of the out-of-door series lighting circuits in this country are of No. 6 B. & S. triple-braid weather-proof copper wire. Some companies will not use any wire smaller than No. 4 B. & S. on a pole line.

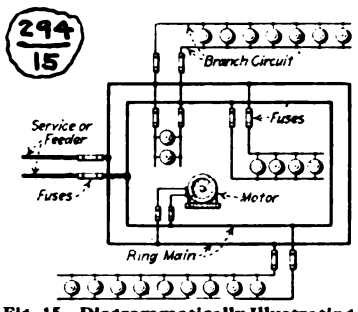

Fig. 15—Diagrammatically Illustrating a Ring Circuit

The line loss in commercial series circuits, using the standard No. 6 wire is relatively small, as is indicated by the following example:

EXAMPLE.‡—(See Fig. 10.) The circuit operates at 6.6 amp., is 5 miles long and serves 80 lamps, each of which requires 50 volts at its terminals. The line is of No. 6 wire which has a resistance of 2.1 ohm per mile or 10.5 ohms for the whole line. This involves a drop of ($V = I \times R$) 10.5 *ohms* × 6.6 *amp.* = 69.3 *volts*. The loss of energy in the line wire is:—($P = I^2 \times R$) = 6.6 × 6.6 × 10.5 = 468 *watts*. The power taken by one lamp ($P = E \times I$) is:—50 × 6.6 = 330 *watts* and for the 80 lamps it would be 80 × 330 = 26,400 *watts*. The loss in the line, 468 watts, is:—(468 ÷ 26,400) but 1.8 per cent of the power taken by the arc lamps.

If No. 3 wire were substituted for No. 6, one-half the energy loss in the line wire would be saved, the cross section and weight

*See the author's ELECTRICAL MACHINERY for details.

‖See the author's ELECTRICAL MACHINERY for a treatment of the theory and construction of frequency changers.

†See the author's PRACTICAL ELECTRICITY.

‡Crocker's ELECTRIC LIGHTING.

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being twice as great, and the cost of the insulated conductor would be nearly doubled. With No. 6 wire the total weight of copper would be 2098 pounds and the cost of the wire (insulated) would be about $500. It is doubtful if it would be wise to invest an additional $500 in order to use No. 3 wire and save one-half the energy or 238 watts, unless the cost of energy is quite high.

Parallel distributing circuits (Figs. 11 to 15) sometimes called multiple circuits, are widely used for the distribution of electrical energy for lighting, power and heating. Commercial parallel circuits are so designed that the voltage between the two sides will be approximately constant under all conditions of load. That is, sufficient copper is used to prevent the voltage drop in them from exceeding a certain small percentage of the receiver voltage which should in each case be determined by the character of the connected apparatus. Or a voltage regulator of some sort is used to maintain the voltage at the load ends of the feeders approximately constant. In dealing with parallel circuits, it is frequently assumed that the voltage, impressed on the circuit by the generator or other source of energy, is constant.

In laying out an out-of-door feeder-and-main circuit the territory to be served is sub-divided into a number of districts by collecting customers in proximity to each other into groups located as near as may be at equal distances from a number of distributing centers. From these centers, the feeders are carried to the station while from the centers extend the mains, each of which serves its own groups of customers. Thus the entire territory is split up into a number of sub-divisions, each in the most direct electrical connection with the central station. Each distribution center is fed by a separate and independent set of feeders.

In interior feeder-and-main systems it is seldom feasible to regulate the voltage on the supply ends of the feeders so as to keep it constant at the center. But most of the voltage drop in the interior system can be confined to the feeders so that the voltage on the group of mains and branches served by a given feeder will be nearly the same and all of the lamps connected to them will

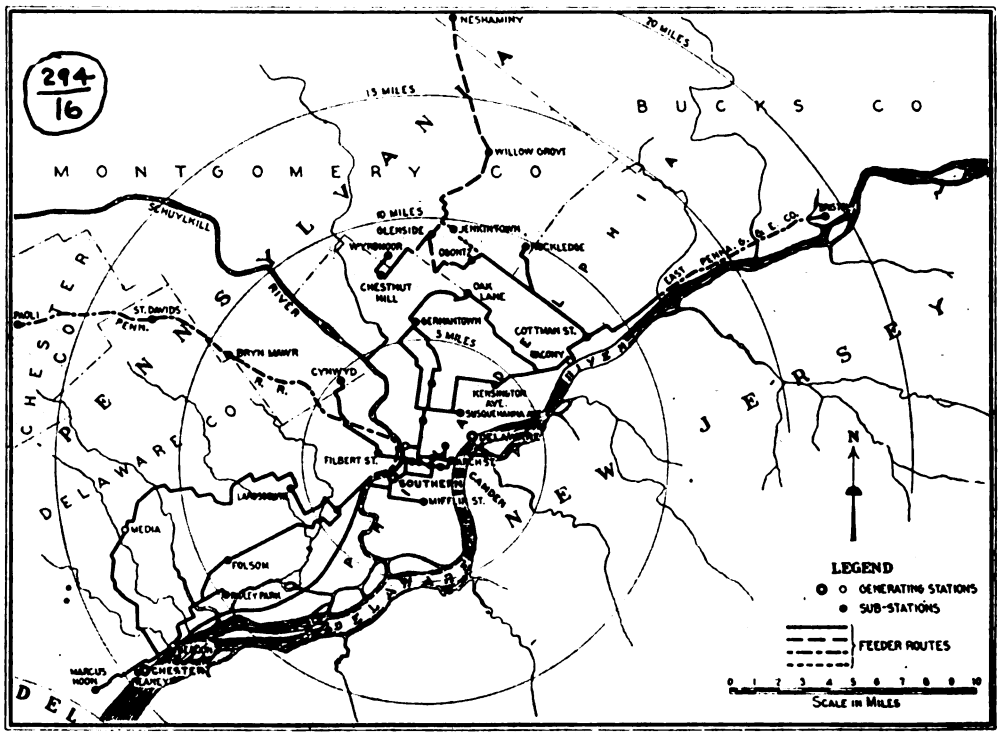

Fig. 16—The Distribution System of the Philadelphia (Pa.) Electric Company

An important advantage of the feeder-and-main system (Fig. 14) is the opportunity it offers for close voltage regulation at the receivers. Receiving apparatus is not connected to the feeders so the voltage regulation on them is unimportant. The regulation on the mains and services is important but they are made of wire sufficiently large that there will not be much voltage drop, even at full load, between the distribution center, where the mains connect to the feeder, and the most distant point on the main. The voltage should be maintained practically constant at the distribution center.

Small pressure wires are sometimes carried from the distribution center back to the generating or substation, so it is possible at any time to know exactly the voltage at the distributing center. Then the voltage at the center is maintained constant by varying the voltage impressed on the feeder at the station. Frequently the voltage at the distribution center is thus maintained constant with a potential regulator.* The varying or adjustment of voltage may be either manual or automatic.

*See the author's PRACTICAL ELECTRICITY.

burn at about the same brightness. Furthermore, the system is so sectionalized that the effects of trouble can be confined to small areas and that the trouble can be readily located.

A ring circuit (Fig. 15) is one wherein the mains form a closed ring. This is a special case of a feeder-and-main circuit. In out-of-door distributions ring-mains are sometimes carried around a city block or around a certain district and branch mains or services are fed by the ring main. One feeder may serve a ring main or several may connect to it, each at a different point. In interior electrical-energy distributions, ring mains are seldom used except in industrial plants. It is sometimes expedient to carry a ring main around the interior of a shop building and connect motor taps and lighting branches to it at the most convenient points (Fig. 15). This provides a very flexible arrangement because there is then no location in the building very far away from the main, hence, new motors or lights can be installed readily and economically.

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Can You Use Any of These Jobs?

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, are seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau. A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of any of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

281. **Draftsman.** Chance for advancement with Philadelphia switchboard manufacturer.

282. **Wireman**
Armature Winders
Motor Winders
Stock-Keeper
} Illinois public service company is in need of all these classes of help.

283. **Salesmen.** Large electrical jobbing house can use one man in Cleveland and one for outside territory; men wanted preferrably under 35 years of age.

284. **Purchasing Agent.** Attractive opening with Milwaukee jobber for man familiar with electrical and mechanical lines.

284-A. **Accountant.** Milwaukee jobbing house will give good salary and chance for advancement to man with ability to make good.

285. **Salesmen.** West Virginia power company is looking for men familiar with sale of current for both lighting and heating, especially for electric ranges.

286. **Engineers.** Shift engineers wanted in Ohio power plant having 7500 K. W. in turbine capacity and 1000 K. W. direct current; $160 per month.

287. **Salesmen.** Machinery house has opening for two salesmen acquainted with electrical equipment, one for Chicago and one for Milwaukee.

288. **Salesmen.** Chicago electrical concern has opening for right man now.

389. **Engineers.** $75 for eight hour shift, in ice, electric and water works; Oklahoma city.

290. **Salesmen.** Detroit electrical supply house can place men for Michigan and Ohio territory

291. **Purchasing Agent.** Personal correspondence solicited by Chicago electrical concern.

292. **Salesmen.** Four attractive territories open with large electrical specialty manufacturer.

293. **Bookkeeper.** Wisconsin electrical jobbing house can use a good, capable man.

294. **Secretary.** Attractive opening for young man with local electrical contractors association in large Ohio city; $125 per month.

295. **Bookkeeper.** Attractive opportunity for man capable of handling an office force and of developing into an executive; good salary.

296. **Salesman.** Man wanted to sell flashlights in several Western States.

297. **Electric Engineers.** Large Eastern lamp manufacturer has place for several capable men.

298. **Detail Man.** $125 per month to office man familiar with pricing and quotations. Good chance for advancement.

299. **Stockman.** Ohio electrical manufacturer has need of experienced stock keeper.

300. **Salesman.** Desk job for man accurate at figures and familiar with detail and correspondence; good future.

301. **Linemen.** Two men wanted ($85 to $100 per month) who can be advanced to foremen.

302. **Chemical Engineer**
Mechanical Engineer
Store Keeper
} Large steel company is in need of all these classes of employes.

303. **Electrician-Lineman.** $100 per month to combination man, in Kansas.

304. **Shipping Clerk.** Experienced man wanted on Pacific Coast; not subject to draft.

305. **Wiremen.** North Carolina power company can use several; $4 per day and advance as soon as proficiency shown.

306. **Linemen.** Oklahoma light and power concern wants men familiar with meters, transformers and outside construction work.

307. **Salesmen.** Three openings; Minnesota, Iowa, South Dakota and Nebraska territory; for men above draft age.

308. **Salesmen.** Wisconsin public service company needs men to sell gas and electric appliances for newly opened commercial department.

309. **Sales Manager.** Attractive opening with large Northern electrical concern; first class man wanted.

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CLASSIFICATION	No. on File	Age	Qualifications	Experience	Salary Wanted	Location
Advertising Managers	3	23–29	H. S.-College	2–8 yrs.	$150–250	Anywhere.
Bookkeepers	2	26–35	High School	5–14 yrs.	$65–100	Anywhere.
Central Station Engineers	3	29–38	H. S.-Univ.	6–18 yrs.	$60–200	Anywhere.
Clerical	3	22–24	High School	2–10 yrs.	$75–125	Anywhere.
Commercial Laboratory Workers	1	29	Tech. School	11 yrs.	.....	Anywhere.
Construction Engineers	3	28–46	H. S.-Univ.	2–27 yrs.	$100–200	Anywhere.
Electricians	1	30	H. S.-Univ.	3 yrs.	$100	Anywhere.
Electrical Engineers	5	30–38	Practical-Univ.	5–12 yrs.	$125–300	Anywhere.
Engineers	5	28–40	Practical-Univ.	5–12 yrs.	$125–300	Anywhere.
Estimators	3	28–36	Practical	9–18 yrs.	$125–160	Anywhere.
Foremen	2	27–34	Practical	9–16 yrs.	$125–160	Anywhere.
General Managers	3	31–38	Practical	7–15 yrs.	$250–417	Anywhere.
Linemen	1	22	High School	5 yrs.	$90	Anywhere.
Managers, Commercial Department	2	34–35	Practical	12 yrs.	$250	Anywhere.
Managers, Contracting	2	26–36	College	5–16 yrs.	$125	Anywhere.
Managers, Jobbing House	2	32	College	13 yrs.	$2,400-10,000	Anywhere.
Managers, Office	3	26–34	High School	8–10 yrs.	$100–250	Anywhere.
Managers, Plant	11	30–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere.
Managers, Traffic	1	53	Practical	15 yrs.	$200	Anywhere.
Manufacturers Representatives	4	36–38	Practical-Tech.	8–10 yrs.	Com.–$200	Anywhere.
New Business Managers	2	29–34	H. S.-Univ.	9–15 yrs.	$125–175	Anywhere.
Office Executives	2	25–32	Grade-Univ.	4–18 yrs.	$85–150	Anywhere.
Power Salesmen	1	36	Tech. Grad.	12 yrs.	$200	Anywhere.
Purchasing Agent	6	24–41	Grade-Tech.	4–21 yrs.	$125–200	Anywhere.
Sales Engineers	3	39–45	College-Univ.	9–20 yrs.	$100–200	Anywhere.
Sales Managers	6	28–41	H. S.-Univ.	4–17 yrs.	$150–300	Anywhere.
Salesmen	27	24–43	H. S.-Univ.	2–25 yrs.	$75–300	Anywhere.
Superintendents	10	28–44	H. S.-Univ.	3–15 yrs.	$125–300	Anywhere.
Telephone Engineers	1	35	H. S.-Tech.	15 yrs.	$200	Anywhere.
Welder (Acetylene)	1	33	High School	5 yrs.	$150	Anywhere.
Wiremen	2	23–25	High School	7–9 yrs.	$75–125	Anywhere.

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STATESMEN-AT-LARGE

BISCHOFF, W. E., Po. 3190, care W. N. Matthews & Bro.....Chicago, Ill.
CARPENTER, JOHN, Po. 1320, care Corsicana Gas & Electric Co.....Corsicana, Tex.
CHASE, SAMUEL A., Po. 4424, care Westinghouse Electric & Manufacturing Co.....East Pittsburgh, Pa.
CRONINGER, C. R., Po. 9624-60V, care General Electric Co.....St. Louis, Mo.
DALY, DAVID, Po. 366-V, care Houston Electric Co.....Houston, Tex.
DOWNS, B. M., Po. 2508, care Hemingray Glass Co.....Covington, Ky.
ELKAS, I., Po. 9931, care Robbins & Myers.....St Louis, Mo.
GUARDIA, A. A., Po. 2657, 4447 Magnolia Ave.....Chicago, Ill.
HAND, WILLIAM, Po. 796, care General Electric Co.....Kansas City, Mo.
HAWKINES, R. V., Po. 11619, care Appleton Electric Company.....St. Louis, Mo.
HEAD, W. B., Po. 139-108, care Texas Power & Light Co.....Dallas, Tex.
HERSTEIN, W. R., Po. 765V, care Electric Supply Co.....Memphis, Tenn.
HICKOX, NORMAN B., Po. 7881, care National X-Ray Reflector Co., 235 West Jackson Blvd.....Chicago, Ill.
HILL, G. W., Po. 1271, 29 West Thirty-Ninth St.....New York, N. Y.
HOLCOMBE, W. P., Po. 901V, care Builders Exchange.....Minneapolis, Minn.
JENNINGS, O. A., Po. 226, care Southwest General Electric Co.....Dallas, Tex.
LAUDERBACH, F. E., Po. 11655, 917 Pine St.....St. Louis, Mo.
LEWIS, P. LLOYD, Po. 6018V, care Wagoner Electric Company.....Kansas City, Mo.
MARTIN, CHARLES L., Po. 176-56V, care Electric Specialty Co.....Dallas, Tex.
RAMIER, J. F., Po. 10604, care Memphis Cons. Gas & Electric Co..Memphis, Tenn.
SERVA, A. A., Po. 425, 2420 Hoagland Ave.....Ft. Wayne, Ind.
TUTTLE W. B., Po. 1031, care San Antonio Traction Co.....San Antonio, Tex.
VOGAN, W. G., Po. 15974, care Northern Electric Co.....Winnipeg, Man.
VOGEL, J. C., Po. 2254-32V, Fifty-Ninth and Woodland Ave.....Philadelphia, Pa.
WADDINGTON, E. H., Po. 5176, care Western Electric Co.....St. Louis, Mo.
WAKEMAN, J. M., Po. 524, 29 West Thirth-Ninth St.....New York, N. Y.
WILCOX, E. A., Po. 6830V, 1819 Eye St.....Washington, D. C.

JOVIAN STATESMEN

ALABAMA
MATTHEWS, H. W., Po. 4476, care Burgoon-Matthews Electric Co.....Birmingham

ARIZONA, CALIFORNIA, NEVADA
SPERRY, LEWIS E., Po. 9415, care New York Insulated Wire Co.....San Francisco

ARKANSAS
GRIFFITH, C. J., Po. 13901, care Little Rock Railway & Electric Co...Little Rock

CONNECTICUT
HOLMES, T. L., Po. 3046, care Western Electric Co.....West Haven

GEORGIA
COLLIER, RAWSON, Po. 4458, care Georgia Railway & Power Co.....Atlanta

IDAHO
KIERSTED, EARNEST C., Po. 10258, care Idaho Power Co.....Twin Falls

ILLINOIS
SPAKE, L. C., Po. 15397V, care Western Editor McGraw-Hill Publishing Co..Chicago

INDIANA
LEE, WALLACE O., Po. 11440, care Indianapolis Light, Heat & Power Co.Indianapolis

KENTUCKY
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville

LOUISIANA
PORTEOUS, W. A., Po. 9226, care Western Union Telegraph Co.....New Orleans

MASSACHUSETTS
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston

MICHIGAN
CAVANAUGH, J. A., Po. 11199, care Benton Harbor & St. Joe Ry. Co..Benton Harbor

MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA
VILETT, W. H., Po. 3675V, care Sterling Electric Co.....Minneapolis

MISSOURI
JOHNSON, FRED, Po. 177V, care Wagner Electric Manufacturing Co...St. Louis

NEBRASKA
ZIMMAN, I. B., Po. 1411, care Omaha Electric Light & Power Co.....Omaha

NEW HAMPSHIRE
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston Mass.

NEW JERSEY, DELAWARE
HOWLETT, C. A. S., Po. 279.....Elizabeth

NEW MEXICO
SHEPARD, J. A., Po. 16106, care Deming Ice & Electric Co.....Deming

NEW YORK
HINES, E. G., Po. 16222, care Electrical World, 239 West Thirty-Ninth St.New York

OHIO
P. B. ZIMMERMAN, Po. 7305V, care National Electric Lamp Association, Nela Park.....Cleveland

OKLAHOMA
McCALLUM, CHARLES, Po. 3394, care Western Electric Co.....Oklahoma City

PENNSYLVANIA
CRISS, GEO. H., Po. 3364.....Pittsburgh

RHODE ISLAND
DAVENPORT, E. R., Po. 8019, care Naragansett Electric Light Co.....Providence

SOUTH CAROLINA
FULLER, W. W., Po. 16462, care Isle of Palms Traction Co.....Charleston

TENNESSEE
WATSON, C. J. R., Po. 2131V, care Electric Supply Co.....Memphis

TEXAS
CLARK, HIRAM O., Po. 6629, care Houston Lighting & Power Co.....Houston

UTAH
TALMADGE, CHARLES H., Po. 1431, care Western Electric Co.....Salt Lake City

VERMONT
LARRABEE, E. E., Po. 1145, care Twin States Gas & Electric Co.....Bennington

VIRGINIA
SEILER, GUY E., Po. 7479, care Virginia Railway & Power Co.....Richmond

WEST VIRGINIA
POWERS, W. R., Po. 784, care Consolidated Heat, Light & Power Co...Huntington

WISCONSIN
GOLIN, CARL, Po. 12385V, care Northwestern Storage Battery Co.....Milwaukee

PROVINCE OF ALBERTA
RICHARDS, NORMAN S., Po. 8985, care Northern Electric Co.....Calgary

PROVINCE OF MANITOBA
SCHUMACHER, J. H., Po. 1742, care Schumacher-Gray Co., Ltd.....Winnipeg

PROVINCE OF QUEBEC
HYDE, E. N., Po. 1614, care Northern Electric & Manufacturing Co...Montreal

FIRST AND SECOND TRIBUNES

ALABAMA
MATTHEWS, H. W., Po. 4476, First Tribune, care Burgoon-Matthews Electric Co.....Birmingham

ARIZONA
*HOWLAND, JOHN, Po. 18686, First Tribune, care Globe Light & Power Co....Globe

ARKANSAS
RUSH, J. C., Po. 1556V, First Tribune, care Rush Bros.....Hot Springs
(*Nicholas Lund, Po. 17257, Second Tribune)

CALIFORNIA
*FAGG, J. H., Po. 12212, First Tribune, care Pacific Gas & Electric Co....Stockton
(*A. F. Flanagan, Po. 12213, Second Tribune.)
GOULD, T. A., Po. 18057, First Tribune, care Redondo Home Telephone Co.....Redondo Beach
*LANDIS, H. G., Po. 288, First Tribune, care Landis Electric Co., 941 8th St., San Diego
(*H. B. Steventon, Po. 14643, Second Tribune)
(R. C. Cavell, Po. 14627, Second Tribune)
(Henry Mellman, Po. 9392, Second Tribune).....Oakland
*NIGHTINGALE, E. L., Po. 18072, First Tribune, care General Electric Co., 724 Spring St.....Los Angeles
(F. J. Airey, Po. 1266, Second Tribune)
*ROWE, A. E., Po. 995, First Tribune, care Telephone Electric Co.....San Francisco
*(Edwin R. Brown, Po. 7715, Second Tribune)
*TOBEY, J. O., Po. 12226, First Tribune, care Pacific Gas & Electric Co.....Sacramento
*(H. F. Schultz, Po. 14914, Second Tribune)

COLORADO
*BURNITE, T. B., Po. 3426V, First Tribune, Boston Bldg.....Denver
(*H. S. Sands, Po. 1708, Second Tribune)
PAUL, CLARENCE M., Po. 4942, First Tribune, care Trinidad Gas & Electric Supply Co.....Trinidad

CONNECTICUT
*LOUWIEN, H. A., Po. 19696, First Tribune, care Danbury & Bethel Gas & E. I. Co.....Danbury

DELAWARE
*SHELTON, H. E., Po. 14400, First Tribune, care Wilmington & Philadelphia Traction Co.....Wilmington

DISTRICT OF COLUMBIA
*CARROLL, H. R., Po. 1794, First Tribune, 714 Twelfth St.....Washington

GEORGIA
(Geo. E. Watts, Po. 12482, Second Tribune).....Atlanta

IDAHO
DOVERY, C. G., Po. 10241, First Tribune, care Idaho Power Co.....Twin Falls
(J. O. Blackstone, Po. 15318, Second Tribune)

ILLINOIS
BAUM, B. E., Po. 19260, First Tribune, care Vermillion County Telephone Co.....Danville
BROWN, EDWIN C., Po. 5278, First Tribune, care Galva Electric Light Co...Galva
(Chas. E. Broderick, Po. 1154, Second Tribune).....East St. Louis
GREEN, WM. A., Po. 13279, care Green Electric Co., 315 South Jefferson St...Peoria
(Jas. R. Downs, Po. 13277, Second Tribune)
KETTRON, C. W., Po. 16416, First Tribune, President, Illinois Elect. Porc. Co.....Macomb
(James R. Massey, Po. 8939, Second Tribune).....Springfield
MORSE, CHESTER A., Po. 14611, First Tribune, care Central Public Illinois Service Co.....Mattoon
(Donald R. Truax, Po. 14617, Second Tribune)
*NELSON, A. L., Po. 15384, First Tribune, care Commonwealth Edison Co..Chicago
(*W. H. Colman, Po. 3040V, Second Tribune.)

INDIANA
HARRIS, A. B., Po. 14154, First Tribune, 570 Washington St.....Gary
*LOUTH, M. E., Po. 16419, First Tribune, care Globe Stove & Range Co..Kokomo
*VICTOR, H. R., Po. 4857, First Tribune, care Varney Electrical Supply Co., 235 South Meridian St.....Indianapolis

IOWA
*ABELL, C. S., Po. 3952V, First Tribune, 419 Main St.....Keokuk
FLACK, FRANK W., Po. 13979, First Tribune, care Iowa Ry. & Light Co..Coon Rapids
McINNERNEY, B., Po. 1400, First Tribune, care Kimball Bros. & Co..Council Bluffs
(E. S. Damon, Po. 1398, Second Tribune)
MURPHY, J. E., Po. 15800, First Tribune, care Murphy-Dunham Co..Sioux City

KANSAS
*CARR, J. E., Po. 16506, First Tribune, 446 S. 7th St.....Salina
*(M. L. Derge, Po. 9616, Second Tribune)
HUBBARD, HARVEY B., Po. 17623, First Tribune, care Hubbard Electric Co..Beloit
*MAGRUDER, H. W., Po. 15816, First Tribune, care Liberal Light, Ice & Power Co.....Liberal
*WADSWORTH, W. A., Po. 7249, First Tribune, care Kansas Gas & Electric Company.....Wichita
*WRIGHT, E. A., Po. 15827, First Tribune, care Great Bend Water & Electric Co.....Great Bend

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KENTUCKY

ADAMS, F. C., Po. 18315, First Tribune, proprietor, Adams Electric Co...Sulphur
BERRY, D. EARLE, Po. 8245, First Tribune, care Ruby House.....Owensboro
(C. C. Childers, Po. 15494, Second Tribune).....Louisville

LOUISIANA

JOUBERT, W. C., Po. 16467, First Tribune, 409 Main St.....Baton Rouge
*LEVY, FERDINAND, Po. 6696, First Tribune, care Interstate Electric Co., New Orleans
(T. N. Lide, Po. 3925, Second Tribune)
*SWANN, L. A., Po. 2730-100, First Tribune, care Lake Charles Railway & Light Company.....Lake Charles
(*J. A. Landry, Po. 127, Second Tribune.)
WILLIAMS, J. A., Po. 5053, First Tribune, care Southwest Gas & Electric Co.....Shreveport
(H. E. Cahn, Po. 13025, Second Tribune)

MARYLAND

(Stanley B. Prather, Po. 1650, Second Tribune).....Baltimore

MASSACHUSETTS

(Kurt R. Sternberg, Po. 7612, Second Tribune).....Springfield

MICHIGAN

*AVIS, C. J., Po. 10086, First Tribune, care Southern Michigan Light & Power Co.....Morenci
*BURCHARD, C. A., Po. 19049, First Tribune, care B. H. & St. Joe Ry. & Light Co.....Benton Harbor
(*Earl Frakes, Po. 15528, Second Tribune)
*CUDAHY, J. D., Po. 16321, First Tribune, care Consumers Power Co....Kalamazoo
(*L. W. Brown, Po. 16319, Second Tribune.)
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St.....Traverse City
MCCLOY, A. S., Po. 11051, First Tribune, care Stevenson Hotel.....Detroit
(J. T. Pearson, Po. 11210, Second Tribune)
*MARBLE, CHARLES M., Po. 13961, First Tribune, 67 College St.....Battle Creek
(*L. R. Greusel, Po. 10918, Second Tribune)
SCHAGANE, P. F., Po. 13871, First Tribune, 617 South Saginaw St.....Flint
(L. G. Copeman, Po. 7219, Second Tribune)
*THORNE, JOHN J., Po. 14749, First Tribune, care Throne Electric Co.....Bay City
(*Samuel Ball, Po. 19542, Second Tribune.)
*TROMBLEY, GEORGE, Po. 14750, First Tribune, care Trombley Electric Co., 130 N. Jefferson St.....Saginaw
(*A. B. Brow, Po. 14737, Second Tribune, 228 South Weadock Ave).....Saginaw
WATSON, GEO. H., Po. 12848, First Tribune, care Consumers Power Co., 124 Monroe St.....Grand Rapids
(R. H. Vandermass, Po. 16484, Second Tribune)

MINNESOTA

*ANDERSON, EMIL, Po. 7805, First Tribune, 239 Plymouth Building....Minneapolis
(*Paul Joyslin, Po. 1254, Second Tribune.)
*GRIMES, W. A., Po. 761, First Tribune, care Northern Electric Co.....Duluth
(*F. A. Johnson, Po. 8192, Second Tribune)

MISSISSIPPI

*BRANDLI, H. E., Po. 15617, First Tribune, care Meridian Light & Power Co.Meridian
(*Chas. M. Rogers, Po. 14485, Second Tribune)
GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co.....Gulfport
*MCANGE, W. N., Po. 16854, First Tribune, care Southern Telephone & Telegraph Co., Telephone Building.....Corinth
NEWBILL, HOMER J., Po. 16855, First Tribune, Box 413.....Tupelo

MISSOURI

*BARBER, A. D., Po. 1850, First Tribune, care Western Electric Company.....Kansas City
*BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co.....Marshall
(G. E. Michel, Po. 9061, Second Tribune).....St. Louis
FOX, CHAS. D., Po. 18163V, First Tribune, care City Light Plant.....St. Joseph
(S. W. Beale, Po. 6840, Second Tribune)
(*A. D. Barber, Po. 1850, Second Tribune.)
(A. M. Grall, Po. 4112, Second Tribune).....Joplin
*NIENHAUS, J. V., Po. 19219, First Tribune, care Perry County Public Utilities Co.....Perryville
*WALKER, A. H., Po. 17669, First Tribune, care Walker-O'Byrne Electric Co.....Springfield

NEBRASKA

BURLEY, W. B., Po. 10291, First Tribune, 318½ West Koenig St.....Grand Island
(J. D. Whitmore, Po. 1409, Second Tribune)

NEW JERSEY

ALEXANDER, JOHN P., Po. 11892, First Tribune, Broad St. Bank Bldg....Trenton
COX, W. A., Po. 18960, First Tribune, care Public Service Electric Co...Newark
FEY, W. E., Po. 10120, First Tribune, care Diehl Manufacturing Co..Elizabeth
*PURINTON, A. J., Po. 9643V, First Tribune, care Atlantic City & Shore Ry. Co.....Atlantic City
(*Wm. Bach, Po. 14191, Second Tribune)
STORTZ, H. W., Po. 16450, First Tribune, care Edison Storage Battery Co..Orange
(J. B. Renwick, Po. 16445, Second Tribune)

NEW MEXICO

*HICKS, A. C., Po. 17978, First Tribune, care Albuquerque Gas & Electric Co.....Albuquerque
*ROBERTS, E. A., Po. 17980, First Tribune, care Public Utilities Co.....Carlsbad
SMITH, JAMES R., Po. 16107, First Tribune, care Raton Electric Light & Power Co.....Raton

NEW YORK

C. C. MacKenzie, Po. 2029, Second Tribune).....Syracuse
BURNS, JOHN H., Po. 870, First Tribune, care McCarthy Bros. & Ford, 41 Eagle St.....Buffalo
(L. F. Philo, Po. 774, Second Tribune)
*PELZ, GEO. V. W., Po. 18674, First Tribune, care New York Telephone Co., 109 West 125th St.....New York
(W. J. Moore, Po. 3136, Second Tribune).....New York
*RUSSELL, R. E., Po. 5561, First Tribune, care General Electric Co....Schenectady

NORTH CAROLINA

JONES, WM. T., Po. 5685, First Tribune, P. O. Box 405.....Fayetteville
SPEAKE, CHAS. L., Po. 16993, First Tribune, care Westinghouse Electric & Manufacturing Co.....Charlotte
*SPENCER, G. L., Po. 11366, First Tribune, 713 Chestnut St.....Greensboro
(*R. H. Milton, Po. 11371, Second Tribune)

OHIO

*ALLIS, CLARENCE L., Po. 13205, First Tribune, care Wooster Electric Company.....Wooster
BRAUN, W. A., Po. 14652, First Tribune, care Braun Electric Manufacturing Co.....Dover
*BULKELEY, W. V. C., Po. 17998, First Tribune, care Columbus Railway, Power & Light Co.....Columbus
*COCHRAN, J. E., Po. 15898, First Tribune, care Ohio Electric Co.....Lima
*COONEY, JAS. J., Po. 13184, First Tribune, care Toledo Railway & Light Co.Toledo
(*Alonzo W. Roush, Po. 12410, Second Tribune)
CRAIN, CHARLES E. Po. 6946, First Tribune, care Crain-Stuart Co.....Springfield
(Fred J. Green, Po. 6951, Second Tribune)
*DUNNING, R. S., Po. 16471, First Tribune, care Forest City Rubber Co., Cleveland
*FENTON, E. BURT, Po. 18446, First Tribune, care Northern Ohio Traction & Light Co.....Akron
(*A. P. Regal, Po. 19064, Second Tribune)
*FOX, HORACE C., Po. 16361, First Tribune, care Massillon Gas & Electric Company.....Massillon
HENCH, L. W., Po. 7854, First Tribune, care Westinghouse Electric & Manufacturing Co.....Youngstown
(E. A. Sanders, Po. 9666, Second Tribune)
HURD, WILLIAM P., Po. 9798, First Tribune, care Northwestern Ohio Light Company.....Van Wert
(*Samuel E. Ringgold, Po. 10995, Second Tribune.)
LOEWE, P. M., Po. 3942, First Tribune, care Oberlin Gas & Electric Co..Oberlin
MILLER, E. G., Po. 13108, First Tribune, care Warren & Niles Telephone Co..Warren
(Marshall, W. J., Po. 10001, Second Tribune.)
PARKER, HERBERT L., Po. 905, First Tribune, care Conneaut Metal Works Co.....Conneaut
*ROHRBAUGH, C. L., Po. 18450, First Tribune, 1211 Carr St.....Sandusky
(*R. C. Beebe, Po. 18442, Second Tribune.)
(J. D. Witner, Po. 14412, Second Tribune)
*SELLS, J. F., Po. 8979, First Tribune, care Mansfield Electric Light & Power Company.....Mansfield
SIMS, E. A., Po. 5968V, First Tribune, care Avery-Loeb Electric Co.....Newark
(F. C. Morrison. Po 18630, Second Tribune)
SMITH, E. B., Po. 10596, First Tribune, care Coshocton Gas Co.....Coshocton
*VAN WINKLE, FRANK D., Po. 12966, First Tribune, care Post Glover Co..Cincinnati
(*L. E. Trotter, Po. 3510, Second Tribune.)

OKLAHOMA

*CORKEN, O. K., Po. 19827, First Tribune, 213 W. First St.....Oklahoma City
(*A. L. Mullengren, Po. 18853, Second Tribune.)
HOWELL, EDWARD. Po. 7896, First Tribune, care Abernathy & Howell, Elks Building.....Shawnee
*RENTCHLER, C. E., Po. 6870, First Tribune, care Enid Electric & Gas Company Enid
(*Lincoln Beerbower, Po. 1475, Second Tribune.)
*STRASSWEG, FRED A., Po. 19821, First Tribune, care Muskogee Gas & Electric Co.....Muskogee
(*Edgar M. Graham, Po. 19811, Second Tribune)
*WALKER, P. G., Po. 6871, First Tribune, care Tulsa Corporation.....Tulsa
(James M. Kinslow, Po. 16770, Second Tribune.)

PENNSYLVANIA

*FADER, W. L., Po. 2883, First Tribune, care Union Electric Co.....Pittsburgh
(*D. Paul Lockard, Po. 5788, Second Tribune.)
FERREE, L. L., Po. 18865, First Tribune, 1830 Regina St.....Harrisburg
KRISE, W. M., Po. 4823, First Tribune, Manager, Jefferson Electric Co Punxsutawney
LODGE, JOS., Po. 18869, First Tribune, 157 East Chestnut St.....Lancaster
MURPHY, WALTER R., Po. 14021, First Tribune, care Meadville Telephone Co.....Meadville
(Carl W. Wilks, Po. 10848, Second Tribune)
(W. T. Snyder, Po. 5128, Second Tribune).....McKeesport
REGER, THOMAS E., Po. 4637, First Tribune, 224 Seventh Ave.....Altoona
*ROUNDS, L. B., Po. 14528, First Tribune, care New Castle Electric Co., 19 Washington St.....New Castle
(*J. C. Chestnut, Po. 14873, Second Tribune)

SOUTH CAROLINA

DOUGLAS, JAS. A., Po. 16984, First Tribune, care Municipal Electric Plant Lake City
(T. A. Brookbanks, Po. 16460, Second Tribune).....Charleston

TENNESSEE

ALLEN, TERRY E., Po., 18838, First Tribune P. O. Box 185.....Jackson
*JONES, GRAYSON, Po. 13782, First Tribune, care Electric Equipment Co., 131 Eighth Ave., North.....Nashville
RUTLEDGE, C. B., Po 2127, First Tribune, care Bluff City Electric Co...Memphis
(B. F. Myers, Po. 12911, Second Tribune)

TEXAS

*IRVINE, R. J., Po. 6251, First Tribune, care San Angelo Water Light & Power Co.....San Angelo
*COOPER, H. S., Po. 365, First Tribune, care Southwest Gas & Electric Co., 405 Slaughter Building.....Dallas
COPLEY, E. F., Po. 7073, First Tribune, care Central Electric Co.....Waco
(L. B. Gardner, Po. 11390, Second Tribune)
*FROST, F. G., Po. 4015V, First Tribune, care Houston Lt. & Pr. Co.....Houston
*KELSEY, L. M., Po. 11350, First Tribune, care S. W. Tel. & Tel. Co....Galveston
(*WOOTEN, J. H., Po. 20357, Second Tribune)
LARABEE, R. W., Po. 1327, First Tribune, care Southwestern Electric & Machine Co.....El Paso
*MILLER, THOS. L., Po. 8766, First Tribune, 219 Poplar St.....Abilene
MONTGOMERY, JOHN G., Po. 11355, First Tribune.....La Marque
MUNROE, WALTER N., Po. 3085, First Tribune, care Texas Power & Light Co.....Paris
REID, BRUCE, Po. 18290, First Tribune, care Gulf Refining Co.....Port Arthur
(Edward T. Keck, Po. 18284, Second Tribune)
*SCOVILL, F. E., Po. 17, First Tribune, care San Antonio Builders Exch. San Antonio
(*C. G. Matthews, Po. 10662, Second Tribune)
SMITH, GEO. B., Po. 6649, First Tribune, 309 Guadalupe St.....San Marcos — Central Texas League — (Lockhart, Luling, Seguin, New Braunfels, San Marcos)

VIRGINIA

*LANCASTER, WM., Po. 6594, First Tribune, care Western Electric Co.....Richmond
(Peter Winston, Po. 1546, Second Tribune)
*MACLEARY, H. M., Po. 9725, First Tribune, 707 Washington St.....Suffolk
(*J. E. B. Holliday, Po. 17106, Second Tribune)
*PATRICK, W. A., Po. 19859, First Tribune, care Dupont-DeNemours & Co. Hopewell
(*G. C. Hurst, Po. 8931, Second Tribune)
WOODHOUSE, H. C., Po. 6618, First Tribune, 54 Bank St.....Norfolk

WASHINGTON

(H. B. Pierce, Po. 7235, Second Tribune).....Spokane

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WEST VIRGINIA

COSTINE, THOS. E., Po. 7699, First Tribune, 1059 McColloch St.....Wheeling
(R. R. Fagin, Po. 9161, Second Tribune)
*WALKER, C. D., Po. 18092, First Tribune, care C. & W. Electric Co.....Huntington

WISCONSIN

*BRIGGS, WILFRED, Po. 12382, First Tribune, 18 Portland St.....Fond du Lac
(*John Adams, Po. 12378, Second Tribune)
DEARTH, E. C., Po. 17144V, First Tribune, care Wisconsin & Minnesota Light & Power Co.....Eau Claire
(Holmes Ives, Po. 18253, Second Tribune)
*DUNHAM, A. W., Po. 7352, First Tribune, care Sun Ray Manufacturing Co..Oshkosh
*ENGSBERG, B. C., Po. 15985, First Tribune, care Light and Water Dept..Lake Mills
*PFEIFER, JOSEPH W., Po. 10981, First Tribune, care Henry Newgard & Company.....Milwaukee
(*W. R. Patton, Po. 1090, Second Tribune.)
LINKER, P. R., Po. 14302, First Tribune, care Wisconsin-Minnesota Light & Power Co.....La Crosse
(Dan. Whalen, Po. 16022, Second Tribune)
TESNIER, LEONARD, L., Po. 18823, care De Pere Electric Light & Power Co..De Pere
*SCHEURMANN, A. R., Po. 17653, First Tribune, 8 Main St.....Watertown
(*Walter O. Wickler, Po. 20000, Second Tribune)

CANADA

ALBERTA

(David Conn, Po. 11885, Second Tribune).....Lethbridge

MANITOBA

*HENRY, J. S., Po. 5994, First Tribune, 152 Gary St.....Winnipeg
(*G. J. Brown, Po. 5977, Second Tribune)

ONTARIO

*BRADLEY, J. M., Po. 13203, First Tribune.....Iroquois Falls
(C. B. Deeks, Po. 17101, Second Tribune).....Coniston
COOKE, W. P., Po. 16714, First Tribune, P. O. Box 178.....Port Arthur

SASKATCHEWAN

SANGSTER, A. G., Po. 7496, First Tribune, 820 Fourteenth St., East...Saskatoon

SPAIN

EDDY, H. W., Po. 11105, First Tribune, care Riegos y Fuersa del Ebro S. A. Apartado 491.....Barcelona

JOVIAN HOTELS

HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their **current membership cards** at the time of settlement. **Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage.** Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

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Baltimore, Md.—EMERSON	$2.00	$2.50
Boise, Ida.—IDANHA	$1.00	$1.50
Boston, Mass.—BRUNSWICK	.....	.....
Charlotte, N. C.—BUFORD	$1.00	$1.50
Chattanooga, Tenn.—TERRESA	.....	.....
Colorado Springs, Colo.—ACACIA	.....	.....
Columbia, S. C.—COLONIAL	.....	.....
Dallas, Tex.—ORIENTAL	$1.50	.....
Des Moines, Ia.—KIRKWOOD	.....	.....
Denver, Colo.—ALBANY	$1.00	$1.50
Detroit, Mich.—HOTEL TULLER	.....	.....
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Louisville, Ky.	" No. 6
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Tulsa, Okla.	" No. 8
Eau Claire, Wis.	" No. 9
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Wilmington (Del.) Jovian League	" No. 24
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New Orleans Jovian League	" No. 29
Houston Jovian League	" No. 30
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Globe Jovian League	" No. 32
Trenton Jovian League	" No. 33
San Antonio Jovian League	" No. 34

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LOYALTY IN WAR TIME

LOYALTY in peace times and loyalty in war times are two distinct things. Not much is required to pass the loyalty test when one's country is not at war; a simple compliance with the law is all that is required.

But loyalty in war times is not a passive quality. At such a time one may be without loyalty and still not be disloyal. A person of this type will do nothing either to assist or to harm his country. He will not give himself to his country's service and he will not contribute financial support. Neither will he discourage others from doing this. He will do or say nothing treasonable, and neither will he do or say anything to put heart in the fighting forces or to uphold the Nation in its struggle. He will be simply a passive onlooker. And that is not being loyal.

Our country is fighting in the most desperate struggle of history. It is a struggle so vast and momentous as to demand the most complete support of every one of its citizens. Passive loyalty—the loyalty of peace times—is not sufficient. The brand of loyalty now demanded is the kind that impels one to offer himself and his all, if necessary, that his country may be victorious in the great conflict.

Most of us cannot go into the fighting forces; most of us cannot enter into those industries directly connected with the war, but all of us can show our neighbors that we have the right brand of patriotism.

Our Government is urging upon us the necessity of saving as an essential to victory. We are told that there is not enough man power and not sufficient materials in the country to win a quick victory if we continue to use this man power and these materials as we did before the war. It is pointed out that there are now more than 2,000,000 men in the Army and Navy, and that by August 1, this number will be increased to 3,000,000, with a steady addition to that number from then on. These men not only cease to be producers, but they become consumers on a vast scale.

Thus it is that we are urged to buy only those things which we need in order that we shall not use up labor and waste materials and transportation, so vitally necessary to the Government in its war work and so much needed in the manufacture of things essential to the health and efficiency of our citizens.

By following the Government's request to produce to our maximum capacity and to consume as little as possible, we shall give practical expression to our loyalty—a militant loyalty, the brand which stamps us as being willing to do our part at home by sacrificing, by getting down to a war basis, by backing up our Government with all our strength. With our money savings we can then buy War Savings Stamps and perform a double service by giving the Government current funds with which to buy the labor and materials so much needed for war purposes which we have refrained from using. That is loyalty.

* * * *

NEED OF CERTAIN SKILLED MEN IN THE ARMY ENGINEER CORPS

The Provost Marshal General authorizes the following:

JULY 1, 1918.

Draft executives in all States:

Number E-1720.

The Engineer Corps is in need of certain skilled men. Only white men qualified for general military service may be accepted under this call. No man who is needed to fill the July calls already announced should be allowed to volunteer for this service. Volunteers may be accepted from the 1918 class provided the registrant waives all time limits for classification and examination.

The following types of men are desired: Auto repairmen, axmen, blacksmiths, boatmen, bridge carpenters, cabinetmakers, calkers, concrete foremen, concrete workers, construction foremen, cooks, draftsmen, electricians, gas-engine men, stationary-engine men, farriers, horseshoers, lithographers, machinists, buglers, photographers, plumbers, powder men, quarrymen, riggers, saddlers, shoemakers, surveyors, tailors, teamsters, telephone operators, timbermen, and topographers.

Please give the widest publicity to this matter, using the "Nation's Want Column" method and urging qualified registrants to present themselves to their local boards for listing. If a sufficient number of volunteers are not secured, involuntary induction will be used. On July 18 wire this office the number of qualified men listed in each of the above occupations which we may expect from your State. Upon receipt of this information we will make definite allotments and complete mobilization details. Local boards must understand thoroughly that these registrants are not to be inducted until orders are received as to allotments and that no men needed to fill the July calls already announced shall be permitted to volunteer. Volunteers for this service shall not be released to the Navy or Marine Corps or to withdraw their application prior to August 1. Acknowledge.

CROWDER.

* * * *

FOR SALE:—An established electrical contracting and supply business in middle west city of 28,000. Selling on account of draft. Address "P", care of The Jovian, Syndicate Trust Bldg., St. Louis, Mo.

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Your Duty Calls You To

Dallas, Oct. 24-26, 1918

With Your Co-operative Ideas on Helping the Electrical Industry to Aid in Winning the War.

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THE JOVIAN

Volume Twelve SEPTEMBER, 1918 Number Ten

War By Civilians

By ARTHUR WRIGHT
London, England

Presented at the convention at Atlantic City, June, 13, 1918.

IT HAS BEEN suggested that notes on the above subject by an Englishman may interest the members of the National Electric Light Association and be of use in indicating some ways of shortening the inevitable time-lag that must exist between the declaration of war by a big nation and the real entry of its people into it.

When it is remembered that it took the British people nearly two years to realize the big thing they were up against, and that even today there are many parts of Great Britain and Ireland which are practically unaffected by the war, it will be seen how difficult it must be to get the bulk of American civilians (with a camouflage of more than 3,000 miles to blind them) to visualize what this World War really is.

In the writer's opinion, no people can be said to appreciate the gigantic problem their Government has in hand until they can bring themselves to believe that war should be the dominant topic of interest; that all talk of "business as usual" is not merely unpatriotic, but grossly unfair to their fellow-countrymen fighting under awful conditions at the Front; that all discussions of "after the war problems," peace terms and questions of reconstruction should be for the time being tabooed, as being both premature and of quite secondary interest. In other words, until the majority of men and women who count are trying to concentrate their mind on **their best** way of helping the country in this unique war for their liberty and rights, they really cannot have any true idea of the stupendous work that the Governments of the Allies have in hand.

The draft will relieve many of the younger men of the problem as to how to help their country, but for the remainder of us it is certainly now time to realize that not only will the war last some years longer, but that a still longer period must elapse after the signing of peace before business can be expected to resume its normal course; that unless the world conflict is to drift on indefinitely, a time will shortly arrive when every able-bodied citizen should find a proper sphere for his war activities; that all talk of a man's individual business or property being damaged by the war must be regarded as a selfish whine and a sure indication of an inexcusable ignorance of the real sacrifices the men at the front are making, in comparison with which any loss we civilians may suffer must be considered as negligible.

While there never can be any sort of equality of sacrifice between that offered by our soldiers and sailors and that made by the civilians working at home, there undoubtedly can be some approach to equality of usefulness between the two groups, if the civilian will at once bring himself to believe that the only thing that really matters now is the successful prosecution of the war.

Without suggesting any increase in the innumerable army of Government officials, committees, or departments, the writer feels that many of us by good-hearted co-operation and discussion may do some useful work by strenuously combating many prevalent and pernicious illusions such as the following:

(1) The war cannot last much longer.

(2) Business must be carried on as usual.

(3) The war will necessarily ruin most businesses.

(4) Civilians need do little on their own initiative, as the Government will in due course call for all the help needed.

(5) Owing to the terrible tragedies that are daily being enacted on the battle front it is both unpatriotic and unfeeling to preach cheerfulness and optimism as to the future.

Let us take these common illusions seriatim: The idea that the war will not last much longer seems just as prevalent today on both sides of the Atlantic as it did three years ago. Most of the reasons for this extraordinary belief are of an extremely vague nature, such as that the belligerent nations cannot stand the strain much longer. Curiously, most of these propagandists of this "short-war" idea admit simultaneously that the defeat of the Allies is unthinkable and that Germany up to now has had most of the military successes.

As America and her big Allies can never contemplate final defeat at the hands of Germany, and as the German people seem at present quite convinced that their military organization must continue to be victorious, it is obvious that a very long time must still elapse before the Allies become strong enough to inflict a really decisive defeat on the enemy or before the well disciplined German people are forced to recognize the certain ultimate failure of misdirected force against the might of Right when supported by the people. The real leaders of Germany today, viz., the Prussian military autocracy, have nothing to gain and everything to lose by accepting the Allies' terms of peace. Why, therefore, with this militaristic crowd still in absolute power, should they commit hari-kari, or why should Germany contemplate today any compensation for the terrible wrongs to the weaker nations that she has trampled on?

The idea of an early peace has also been stimulated by the many attempts which the enemy has made to negotiate peace while she still enjoys a military success. Her reasons for wanting peace now are so transparent and contrary to those which will govern the Allies in framing their peace terms, that not even a vestige of an Allied peace is yet in sight.

Again, the idea of a proximate termination of the war seems curiously prevalent among some of the leading representatives of all the belligerent nations, as shown by both the Allies and Germany in past and present discussions and by appointing committees to consider the many after-the-war problems that will ultimately have to be tackled. The fact that both sides are studying almost identically the same matters should convince us that the early peace anticipated by the Germans can only be consistent either with a decisive victory by them or with a patched-up compromise with us, neither of which are the Allies ever likely to accept, although the alternative may be the protraction of the struggle indefinitely.

(continued on page nine)

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor
W. R. JOYES, Po. 13813, Associate Editor

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THE ANNUAL CONVENTION

NOW for the Annual Convention. This year we are going back to the birthplace of Jovianism—the great state of Texas. That of itself should appeal strongly to the sentiment of all members of the fraternity. But it is not alone upon sentiment that the membership is urged to attend the Annual Convention this year. Although we are firm believers in sentiment, and predict that a number of members will be actuated by it and the warm hospitality that is sure to be accorded those who attend, there is a greater reason why there should be a large attendance when the convention is called to order at Dallas. That reason is one of DUTY. The DUTY each member owes to the organization, the electrical industry and to his nation.

That will be the key-note of the Jovian Annual Convention this year—DUTY TO THE NATION. It will have preference over all other issues. It will be the one pivot about which the combined attendance will concentrate its thought and activities.

THE OBJECT WILL BE TO RENDER TO THE NATION A GREATER SERVICE TO AID IT IN ITS TASK OF CRUSHING AUTOCRACY AND OPPRESSION.

The paramount questions will be: What can the Jovian Order—the electrical industry—do that it is not now doing to assist in winning the war? In what way can it best direct its efforts towards rendering the maximum service of which it is capable? How can it best be organized in order to place its full potential strength at the commands of the Administration?

These are great questions—serious questions—questions for every man affiliated with the Order and associated with the electrical industry to consider diligently.

You know the wonderful part electricity is taking in the war. You know upon the effectiveness of its application momentous decisions rest. You know, or should know, that the Prussian government has commandeered its electrical industry and is operating it under military control in order to draw from it the maximum service it is capable of rendering.

There is no haphazard, hit-or-miss policy in Prussian operation of its electrical industry. There is complete military supervision over it throughout the entire empire.

We Americans know that the electrical industry of the United States is superior to that of Germany. We know it is capable of rendering a greater service to our military forces than Germany's electrical industry can render to the Prussian war lords. But we know just as well that the American electrical industry must be organized for the purpose—that it must voluntarily organize its own forces in order to make its superiority effective.

We believe that greater efficiency can be attained by voluntary effort than by enforced effort, provided the voluntary effort is intelligent and sincere, that Americans working under the stress of their own honor and patriotism can attain greater results than the shackled slaves of autocracy driven by the bayonet and lash. Consequently, the organization of the electrical industry to its full potential strength and the voluntary co-ordination of itself to the commands of the National Government is in full keeping with the principles of Democracy.

What service the Jovian Order can render to the Nation is the BIG, VITAL QUESTION to be considered at the Dallas convention. What service and HOW TO RENDER IT is a question for the serious consideration of every member of the Order between now and the date of the convention.

On the date the Jovian Convention convenes it will be the DUTY of each member to participate in the work of organizing to deliver a greater service to the Government.

It is a call for your ideas. They may be worth millions of dollars, thousands of lives, or prove a factor in bringing the war to a successful conclusion more quickly.

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Remember, this much is certain—your ideas must be put to work to be worth anything at all in this movement, so don't fail to be on hand to discharge your DUTY—you are needed.

* * * *

ARE YOU ASLEEP AT THE SWITCH?

AGAIN we are going to ask the entire membership of the Jovian Order to wake up to the benefits to be derived by the Jovian accident and health insurance policies. Of course we realize that there are hundreds of insurance companies, and that you have perhaps heard so many arguments about insurance that at times you have felt like breaking up the furniture, but there is JUST ONE POINT we want to call your attention to—we are neither getting a salary nor a commission for selling you Jovian insurance. Not one cent of remuneration.

The sole object in inaugurating the insurance feature, and in making arrangements with an insurance company to handle it, was, and is, for the purpose of delivering to members an actual dollars-and-cents value on their Jovian membership, an ACTUAL DOLLARS-AND-CENTS VALUE THAT WOULD AMOUNT TO MORE THAN THEIR DUES. THIS HAS BEEN ACCOMPLISHED.

By the advantageous plan arranged with the insurance company, the use of one single Jovian accident insurance policy saves a member MORE THAN THREE TIMES THE AMOUNT OF HIS ANNUAL DUES.

A large number of members have awakened to the value of the Jovian insurance policies; others are applying for them daily, as you may note by the figures in the double spread announcement in the center of this issue of the magazine, BUT WHY SHOULDN'T EVERY MEMBER OF THE ORDER TAKE ADVANTAGE OF THE INSURANCE?

In calling your attention to the number of members who have taken advantage of the insurance, we wish also to state that A NUMBER OF MEN WHO ARE NOT JOVIANS ARE BEGINNING TO REALIZE ITS VALUE.

It has made a number of men who are not members take notice. They want to get into the order—PAY THEIR INITIATION FEE AND DUES—in order to take advantage of it. It has been an incentive for a number of men who are eligible to do so to affiliate with the Order recently.

If you will turn to the center of the magazine, you will note that the amount of Jovian insurance in force August 14 was $2,755,000.00. While this is proof of success of the insurance plan, and the amount is growing steadily, it is somewhat a puzzle to understand WHY A LARGE NUMBER OF MEMBERS DO NOT TAKE ADVANTAGE OF IT. The privilege to do so has been paid for when you pay your dues; the saving has been conclusively proven to be an actual one, the nature of the policies mark them as equal to those sold by OTHER HIGH-CLASS INSURANCE COMPANIES.

In comparing the annual premium of the Jovian policies you must bear in mind THAT THEY ARE NOT PUNCTURED WITH EXCEPTIONS. They do not read that if you are hurt this, that, or the other way, you do not get any indemnity. They cover you AS FULLY AS ANY ACCIDENT POLICIES ISSUED.

If you are laboring under the impression that you can buy insurance in another manner cheaper, you are pretty certain to be rudely awakened when you go to collect for some disabling accident, or your family may be the sufferers when they go to collect, should you get killed, when they discover "YOU WERE NOT INSURED AGAINST THAT KIND OF AN ACCIDENT."

All of these questions were given due consideration in the arrangement for insurance to cover Jovian members. The best insurance to be had has been provided for you—the best, minus the selling cost, at less than half the usual price. It is up to you to take advantage of it.

THINGS TO REMEMBER ABOUT THE VALUE OF WAR INVESTMENTS

TWO YEARS after the Spanish-American War, or in 1900, the Government offered for sale an issue of bonds bearing two per cent interest, at par value. The issue was entirely over-subscribed. That was a financial performance no other nation has ever equaled.

In 1888, four per cent United States bonds sold as high as 130, in 1901 as high as 139⅞, on the stock market.

The United States has never defaulted on any of its bonds.

Not one of the bondholders has ever lost a cent, principal or interest, except those who have voluntarily taken losses by selling their bonds in a period of temporary price depression.

The resources of the country are estimated at from two hundred and fifty to three hundred billions of dollars, all of which stands back of the Government bonds and other securities. In addition to this wealth, there is a guarantee in the honesty of the American people as a nation that makes the United States Government securities the safest investment in the world.

* * * *

ELECTRICAL CONDITIONS IN THE FAR EAST

EDGAR A. WILHELMI, export manager of the Robbins & Myers Co., Springfield, O., has recently returned from a four months' trip to the Far East, including the Hawaiian Islands, Japan, China and the Philippines.

Mr. Wilhelmi states that in general the industries of these countries are experiencing the same prosperity as those in this country, due to the war demands. The only adverse conditions affecting business are the uncertainty of receiving imported goods and the high freight rates.

In Japan business is especially active and all branches are sharing in the general prosperity. As in this country, the only limiting factor is the difficulty of obtaining raw materials. Japan is rapidly becoming an important manufacturing nation, and the electrical manufacturing industry is becoming especially strong. There are more than fifty manufacturers making small electric motors, generators, transformers, fans, lamps and supplies. They have made notable advance in these lines, patterning their goods after American and European designs, but so far the same progress has not been made in the manufacture of heavy electrical machinery.

In addition to the Eastern markets, Japanese manufacturers are reaching out for world trade, and at the present time they are sending salesmen to South America, Australia, India and even into the United States and Europe. They seem to be capable of making goods of fair quality at extremely low costs, due to low labor costs, and bid fair to become one of the active competitors of the United States and European countries in the drive for world trade after the war. Japanese manufacturers are encouraged by the government by protection in the home markets, which makes it practically impossible for foreign manufacturers in many lines to enter this market successfully.

A Program, Unique and Compelling, Planned and Under Way For

The Jovian Annual

DALLAS, OCT. 24-26

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BACKING AMERICAN SHIPS WITH AMERICAN DOLLARS

By EDWARD N. HURLEY
Chairman United States Shipping Board

THE United States is the greatest coffee consuming nation in the world.

We buy every year from Brazil about $100,000,000 worth of coffee. Potentially, that should be the greatest influence for sales of our own products to Brazil. Actually, this coffee consumption has yielded the United States only a fraction of its potential benefits.

European shipping concerns have controlled practically all shipments from Rio de Janeiro and Santos to New York and New Orleans. About two-thirds of the coffee comes to New York and one-third to New Orleans. An average of three ships a month were required in normal times to carry to New Orleans the 2,000,000 bags for the South and Middle West. In a well balanced trade, these ships would have been available for return cargoes of American products.

The Middle West, especially, might have been in an advantageous position, because it could command lower railroad rates to New Orleans than New York. But the ships of this coffee fleet, all under foreign flags, made no effort to secure return cargoes. After discharging coffee, they loaded with cotton and other raw materials for European manufacturers. They steamed away to Europe, took on cargoes of manufactured goods made largely from American raw materials, and carried these back to Brazil.

Lacking ships to South America and banks on that continent, our coffee importers had to pay exchange and commission to European banks. The foreign ships upon which we depended provided a smooth highway for Brazilian coffee into New Orleans, greased the way for American raw materials to reach European mills, and carried European goods to Brazil, where they were paid for with the Brazilians' profits on sale of coffee to the United States. These foreign ships were so routed that they rendered their first service to the European exporter, their second service to the Brazilian coffee grower—and we came in for service after that.

Our foreign trade has been full of opportunities like this. But, lacking American merchant ships and American banking facilities in other countries, we have let the foreigner improve the opportunities.

Now we are building a real merchant marine. American banks are establishing foreign branches. The American ship and the American dollar are going to work together, and the more attention we pay to this great field of business the harder they will work for us.

Shipbuilding for war purposes has made a tremendous appeal to the American imagination. We must now put our merchant marine into the Nation's thought in just the same way. These are the Nation's ships. They will increase prosperity for people in the corn belt even more than those on the seaboard. They will serve the farmer and consumer even more than the manufacturer and exporter. When we get the American merchant marine into the daily thought of every producer, and our boys and girls play with shipping toys, and American youth consider the sea in choosing a career, then we shall have something upon which to build foreign trade, foreign exchange, foreign investment.

War has made us a real creditor Nation. We have bought back from European investors billions of dollars' worth of American securities. We now own our own railroads and factories, and hold the bonds issued by our State, county, and municipal governments. We have lent billions of dollars to the Allies, and will lend them billions more before the war ends. We have opened book accounts with nations not actively engaged in the war who want to buy goods on credit from us. Best of all, we have begun to learn new habits of thrift and investment through buying liberty bonds, so that peace ought to find us with the mortgage of foreign investments on this country paid off and money in pocket to lend other nations.

The world owes us a great deal of money. But our principal debtors are the great manufacturing and exporting nations, like England, France, and Italy. Naturally, they will pay their debts in goods as far as possible, and much of the trade which grows out of these obligations will take the form of shipments of American raw materials to make the goods with which they will pay us. Necessity will also lead them to be active sellers of manufactured goods in South America, the British colonies, and the Orient, and in that trade there will never be either American competition or jealousy over business that properly belongs to them, because we realize the enormous sacrifices they have made for humanity, and wish to see them return to peaceful prosperity as fast as possible.

But there is trade to be built on new shipping routes between this and other countries. More than that, there is service to be rendered other countries by our ships and money.

Let us take Brazil as an illustration. When American ships go to Rio and Santos for coffee, they will carry American officers and seamen. There are no better salesmen or creators of good-will in the world than the men who man merchant ships running on regular lines from one country to the other. For their employment depends largely upon freight traffic. With our coffee, brought to us in American ships, and paid for in American manufactures sent back to Brazil, our officers and sailors will work like those of other nations to get freight.

With our manufacturers making payments in goods to Brazil, there will be a direct money exchange between Rio and New York, Santos and New Orleans, instead of the old triangular payment of money by American coffee importers to Brazil through European banks. So American dollars will be working with American seamen to safeguard the trade that belongs to us.

What sort of manufactured goods will our ships carry back to Brazil?

Some of the stuff will be for consumption, such as textiles, shoes, hats, millinery, agricultural implements, office equipment, household furniture. But Brazil needs production and public service equipment as well. The Balkan war diverted European capital from her industries and communities. The world war has put her on still shorter allowances. Her prosperity thus far has rested on two products—coffee and rubber. The development of rubber plantations in the East Indies has decreased her sales of crude rubber and awakened her to the necessity of wider agricultural development—cattle raising, grain growing, and the like. This calls for investments in agricultural enterprises, the settlement of new lands, the building of new railroads, the financing of new communities. Brazil also possesses vast undeveloped water power, and is endeavoring to establish manufacturing industries. She will need a market for her bonds and stocks, and if the American dollar helps her create the basis of prosperity, it will be followed by American electrical machinery, railroad equipment, and other apparatus, thus creating freight for the return voyages of American merchant ships operating regularly in the Brazilian coffee and passenger trade.

Ships are the keystone of the whole elaborate structure.

Our trade abroad has grown haphazard, like Topsy, and become lopsided in many ways. It has been unbalanced financially, so that our profits have gone to pay foreign shipping companies, bankers, and insurance brokers. It has been unbalanced in tonnage, so that while we bought products of other nations and should have been building trade with them in finished goods, we have merely supplied raw materials for other manufacturing nations. We have been set aside on one leg of

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the triangular voyage when we should have been doing business direct, give and take, as we do it at home—you deal with me and I deal with you. Our foreign trade has grown against every handicap simply because of excellent American products which overcame competition on merit.

Ships are the rallying point round which we must pull all this business together, and now is the time for every American to begin studying our merchant ships and all that goes with them in the way of ocean delivery service, foreign exchange and investments, sales of American products for the out voyage, and purchases of raw materials for the return trip. We will shortly have the ships. It is time to acquire the knowledge of ships which will enable us to utilize our new merchant fleet for the service of this and other nations.

* * * *

War By Civilians

(*continued from page 5*)

The next pernicious doctrine is "business as usual." While this offspring of the "short war" illusion should be easily buried along with its parent, its possible consequences in slowing down war activities are so serious that it is necessary to point out vigorously how, besides causing much mental suffering among the men in the trenches, the idea is the very antithesis to any and all speeding-up of preparation for war.

The fact that no business can or should be "as usual," does not carry with it the idea that many need be ruined, provided a complete rearrangement of methods and products suitable to the country's new conditions and wants is promptly worked out. In England the change in most businesses required by war conditions has been generally accompanied by a very marked increase in prosperity, due partly to the enhanced requirements for nearly all classes of manufactured goods and raw materials, and to the much higher wages earned by the working classes. The theory of businesses being necessarily ruined in countries not in the actual war zone is not borne out in England.

If we bear in mind the enormous varieties of manufactured goods that go to replenish the war wastage and the fact that many of these cannot be turned out fast enough or early enough by newly erected national factories, but must consequently be produced by private concerns, it will be seen that most active manufacturers and traders should be able to use their skill and equipment very much to their own advantage and that of their country first of all.

The electrical industry forms a useful illustration of the stimulating effect of war on trade.

Electric power is now recognized as one of the most useful agents in producing the various kinds of war munitions. In most European countries an ever-increasing demand for power has been experienced at much higher costs and rates than in pre-war days. During the last three years in England, the tremendous demand for all kinds of manufactured accessories has caused the Government to distribute broadcast huge orders for materials and articles among an endless variety of small engineering, woodworking and textile shops, with the result that a wholly unexpected demand from them for electric power, motors, cables, switches, lamps, etc., has occurred.

Unfortunately, the electrical utilities in the early years of the war, owing perhaps to the belief in its probable short duration and to the higher price of money, materials and labor, allowed their active power plants, stocks of materials and standby plants to get into a state of disrepair and low in quantity, so that when the demand for additional power came in 1916-1917, they were unprepared in many cases to meet it, or began overloading the plant with the usual consequences of frequent break-downs. Some other electrical industries have not benefited by the war, such as those dealing in expensive lighting fixtures and luxury appliances; yet the manufacturers who have understood the altered conditions have not only benefited greatly by the war demands, but have indirectly materially helped their country. If public service commissioners can be convinced of the very essential nature of electric power in war times and made to realize how seriously the present high price of money, plant and labor must affect the cost of producing electrical energy, it surely should not be difficult to obtain their consent to raising rates to meet these present higher costs. Thus utilities would be assured of a fair return on any existing or new investment required to meet the increased demand for supply during the period of the war and the subsequent years of reconstruction.

In the writer's opinion, there should now be no hesitation in adapting most businesses so that instead of having to face years of stagnation of trade, nearly every one can be prepared to participate in the increased demand for service, manufactured goods and raw materials that must soon become acute in America, owing to the requirements and the enormous expenditure of money by the Governments and well-paid working employees of all kinds. It should also be borne in mind that most of the money spent on munitions must very soon filter through to nearly all laboring members of the community. In Great Britain the working classes and their families never earned so much as they are now doing, with the result that luxury trades such as jewelers, furniture and musical instrument dealers, dressmakers, picture stores, etc., are exceedingly prosperous, notwithstanding the many restrictions, excess profit taxes, etc., that have been imposed on them.

In regard to the fourth mistaken view that civilians need do little, the writer finds it very generally believed that the initiative in making men and women play their part in the war must rest solely with the Government; and that there are very few directions in which civilians can on their own initiative devote their abilities to the helping of their country. Now, surely, this is a very mistaken view for a democracy in such times, when besides fighting, governing, inspecting and manufacturing the ordinary munitions of war, there are very many other functions open to men and women, in addition to the well recognized and necessary work connected with the Red Cross and kindred institutions. How frequently one meets with capable men and women who are devoting a great deal of their time to some rather insignificant work in connection with routine clerical, police and mechanical Red Cross work, when if they or their advisers had the necessary initiative they could be of vastly more use by using their special capabilities in some definitely efficient direction. The answer to this suggestion is generally that it is better to do these little insignificant jobs than to do nothing at all, but this in many cases is only an excuse for taking the more popular and easily found way of doing some sort of patriotic work rather than finding out how one can **best** give his services to the nation.

While there always must be in any war a tremendous waste of special abilities, where an equitable draft system is imposed there seems no reason why this waste of talent should be anticipated by voluntary workers until the supply more than meets the demand.

As to the last subject in the list, cultivation of cheerfulness as requiring a great deal of propaganda, the writer feels that only good can be done by persistently fostering a spirit of cheerfulness among all classes of the community at home, and showing them that although the war must continue for a long time, the Allies and the World must in the end win by it. Pessimism in brooding over the terrible losses of the war and ignorantly criticising the Government's conduct of the war, can only make its stupendous task harder and longer to complete. Any doleful tone today can serve no other purpose than to unsettle the morale of the nation as to the inevitable losses that are bound to occur in the titanic struggle between belligerents both of whom at present consider themselves unconquerable.

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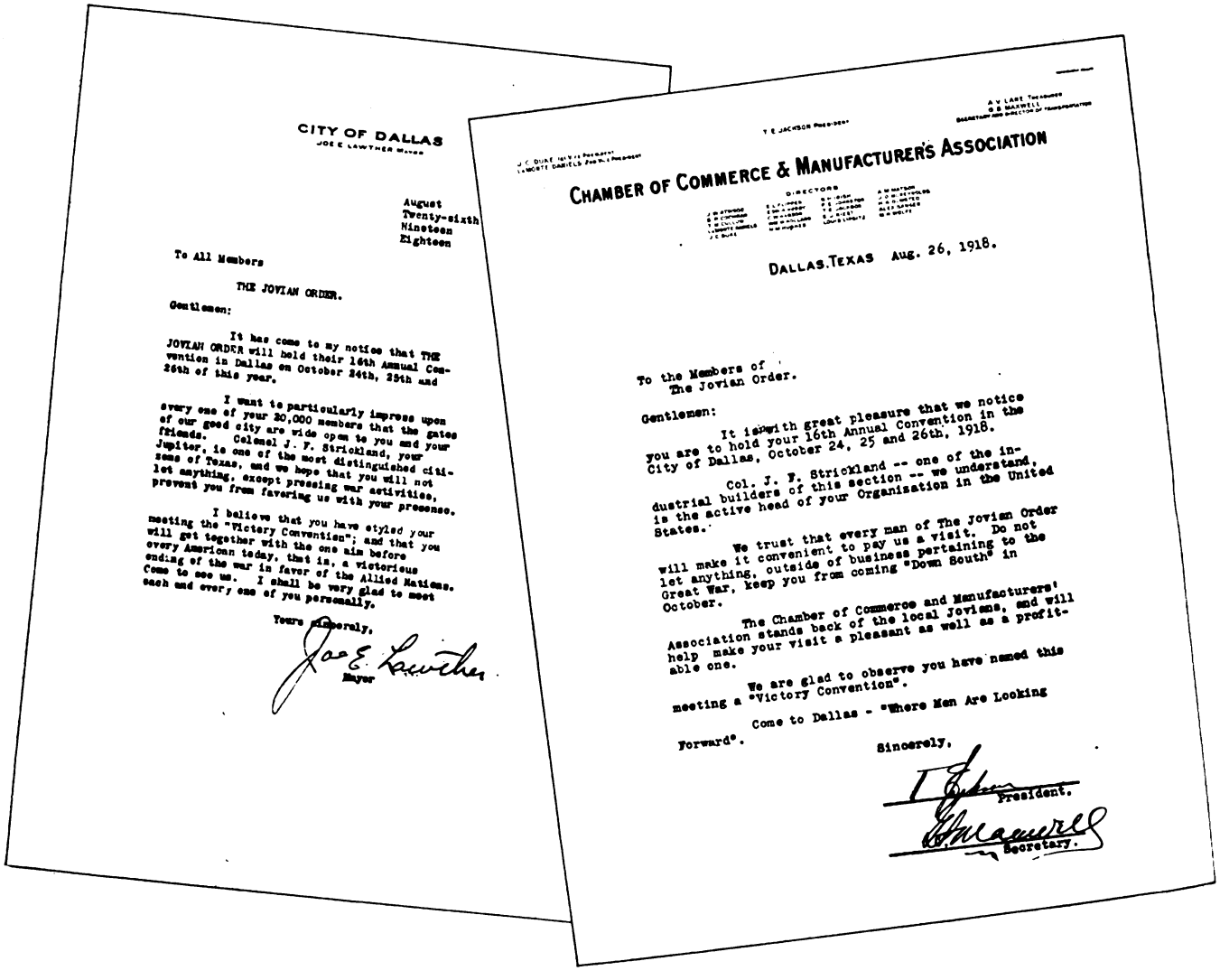
ATTEND THE

VICTORY CONVENTION

Sixteenth Annual Meeting of THE JOVIAN ORDER

Dallas, October 24th, 25th and 26th, 1918



CITY OF DALLAS
JOE E. LAWTHER Mayor

August
Twenty-sixth
Nineteen
Eighteen

To All Members

THE JOVIAN ORDER.

Gentlemen:

It has come to my notice that THE JOVIAN ORDER will hold their 16th Annual Convention in Dallas on October 24th, 25th and 26th of this year.

I want to particularly impress upon every one of your 30,000 members that the gates of our good city are wide open to you and your friends. Colonel J. F. Strickland, your Jupiter, is one of the most distinguished citizens of Texas, and we hope that you will not let anything, except pressing war activities, prevent you from favoring us with your presence.

I believe that you have styled your meeting the "Victory Convention"; and that you will get together with the one aim before every American today, that is, a victorious ending of the war in favor of the Allied Nations. Come to see us. I shall be very glad to meet each and every one of you personally.

Yours sincerely,
Joe E. Lawther
Mayor

CHAMBER OF COMMERCE & MANUFACTURERS ASSOCIATION

DALLAS, TEXAS Aug. 26, 1918.

To the Members of
The Jovian Order.

Gentlemen:

It is with great pleasure that we notice you are to hold your 16th Annual Convention in the City of Dallas, October 24, 25 and 26th, 1918.

Col. J. F. Strickland -- one of the industrial builders of this section -- we understand, is the active head of your Organization in the United States.

We trust that every man of The Jovian Order will make it convenient to pay us a visit. Do not let anything, outside of business pertaining to the Great War, keep you from coming "Down South" in October.

The Chamber of Commerce and Manufacturers' Association stands back of the local Jovians, and will help make your visit a pleasant as well as a profitable one.

We are glad to observe you have named this meeting a "Victory Convention".

Come to Dallas - "Where Men Are Looking Forward".

Sincerely,
President.
Secretary.

From the Business Clubs of Dallas—

We most heartily endorse the above letters from our Mayor and the Chamber of Commerce & Manufacturers' Association, and hope you will be sure to come to Dallas next October. We will use our every endeavor to make your stay a pleasant one.

DALLAS ADVERTISING LEAGUE
DALLAS AUTOMOBILE CLUB
DALLAS CREDIT MEN'S ASSOCIATION
DALLAS ROTARY CLUB
KIWANIS CLUB
THE LIONS CLUB
THE MUTUAL CLUB

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Personal Pointers

Through the course of life are shifting
Winds and breakers that conspire
To prevent a fellow drifting
To the goal he may desire;
So the rule is this, my brother,
When you see some fellow win,
You can bet somehow or other
That his effort figures in.

* * * *

J. B. Wilson, Po. 18198, until recently new business manager of the Doherty property at Meridian, has been transferred to Massillon, Ohio, where he holds a similar position.

* * * *

L. J. Lemen, Po. 13195, formerly First Tribune, Massillon, Ohio, and manager of the Massillon Electric & Gas Company, has resigned his position to enter the army.

* * * *

J. G. Fisher, Po. 20189, distribution superintendent of the Dumright, Okla., division of the Oklahoma Gas & Electric Company, has been called for military service.

* * * *

J. J. Fagan, Po. 13187, manager of the Doherty property at Salina, Kan., was transferred recently by that company to Meridian, Miss., and given charge of the utilities in that city.

* * * *

Jas. B. Olson, Po. 307, formerly general sales manager of the Habirshaw Electric Cable Company, New York, has become associated with the Okonite Company, 501 Fifth Ave., New York.

* * * *

F. E. Morrow, Po. 8915, has been transferred from the Cleveland office of the National Carbon Company to the St. Louis office of that company. His headquarters are now at 2035 Railway Exchange Building, St. Louis.

* * * *

George Rauch, Po. 10987, new business manager for the Doherty interests at Joplin, Mo., has recently been transferred to Oroville, Ohio, and made manager of the company's property at that point.

* * * *

G. Wallace Craven, Po. 18322, of Louisville, Ky., formerly in charge of the application department of the Louisville Gas & Electric Company, is now in France with Company F, 6th U. S. Engineers.

* * * *

John M. Drabelle, Po. 10380, formerly electrical engineer for the Iowa Railway & Light Company, Cedar Rapids, Ia., was appointed, effective August 1, mechanical and electrical engineer of the entire system of that company.

* * * *

Robert A. Bachman, Po. 11896, who for a number of years has been vice-president and general manager of the Edison Storage Battery Company, Orange, N. J., has resigned, and will devote his time to his personal affairs.

* * * *

J. F. Owens, Po. 19818, vice-president and general manager of the Oklahoma Gas & Electric Company, has been appointed chairman of the New Industries Committee of the Chamber of Commerce of Oklahoma City.

* * * *

Lincoln Beerbower, Po. 1475, has recently been appointed chairman of the Industrial Committee of the Enid, Okla., Chamber of Commerce. Jovian Beerbower is manager of the Enid division of the Oklahoma Gas & Electric Company.

F. D. PHILLIPS, Po. 313, former statesman for Missouri, who has been elected President of the Central Telephone & Electric Co., of St. Louis, at a recent meeting of the Board of Directors of that Company. Prior to his election as President, Jovian Phillips was Vice-President and Sales Manager of the Company. He has been an active member of the Order since his affiliation, having served as Secretary and on various committees of the St. Louis Jovian League. He is also a member of the St. Louis Chamber of Commerce and of the Executive Committee of the Sales Managers' Bureau of that organization.

* * * *

William S. James, Po. 5832, who until recently was connected with the Rochester Electrical Supply Company, Buffalo, N. Y., is now serving on the Electrical Division, War Industries Board, Washington, D. C.

* * * *

Timothy F. Holt, Po. 19639, formerly salesman for the Fullerton Electric Company, Bronx, N. Y., and who enlisted in the Navy April 1, 1917, has been promoted to the position of Second-class Electrician aboard the U. S. S. Amphitrite.

* * * *

E. A. West, Po. 6757, chief engineer of the Denver Tramway Company, Denver, Colo., has recently resigned his position to take charge of the Department of Transportation and Housing of the United States Shipping Board Emergency Fleet Corporation. His headquarters are at San Francisco.

* * * *

F. W. Hausmann, Po. 16510, who for several years was connected with the Salina Light, Power & Gas Company, Salina, Kan., is now with the Air Nitrate Corporation, Mussel Shoals, Ala. He is identified with the equipment and progress department of the Nitrate corporation.

* * * *

C. D. Miller, Po. 9539, who until recently was connected with the Westinghouse Electric & Manufacturing Company, Ellicott Square, Buffalo, N. Y., is now manager of the Buffalo office of the Burke Electric Company, of Erie, Pa. Jovian Miller's headquarters are 509 Morgan Building, Buffalo.

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A. W. SIEMS, Po. 12021, formerly of the firm of Zenker & Siems, New York City, has severed his connection with that firm to engage in the electrical engineering business for himself. His headquarters are at 1358 Broadway, New York City.

* * * *

H. A. LOUWEIN, Po. 19696, formerly secretary of the Danbury & Bethel Gas & Electric Company, Danbury, Conn., is now connected with the Lumber Division of the War Industries Board, doing special work.

* * * *

STANLEY N. ABBOTT, Po. 19915, office manager and assistant sales manager of the Hygrade Lamp Company, Salem, Mass., has entered the Officers' Training School for the Ordnance and Quartermasters' Departments, and is located at Camp J. E. Johnston, Jacksonville, Fla.

* * * *

HOWARD F. VIOT, Po. 2156, was recently appointed manager of the Chicago district of the Shelby Lamp Division of the National Lamp Works, with headquarters at 730 South Michigan Avenue, Chicago. Prior to his appointment Jovian Viot was manager of the Omaha district for the company.

* * * *

J. H. FENTON, Po. 11861, of the sales department of the Westinghouse Electric & Manufacturing Company, Los Angeles, Cal., has recently been appointed manager of the industrial division of Los Angeles branch of the company. Included in his jurisdiction are the Tucson and El Paso offices.

* * * *

ROSS B. MANTEER, Po. 2330V, recently connected with the Philadelphia Electric Company, and formerly engineer for the Southern Sierras Company, with headquarters at Riverside, Cal., has been commissioned a captain in the Engineers' Reserve Corps, and is at present stationed at Camp Lee, Petersburg, Va.

* * * *

JOHN W. BROOKS, Po. 254-11, general manager of the Pass & Seymour Company, Solvay, N. Y., has recently been appointed a member of the new Community Labor Board of the Tenth District. The Board as now organized has for its purpose the handling of labor problems which may arise during the war.

* * * *

SERGEANT JAMES A. KIRK, Po. 17460, who until his enlistment was illuminating engineer, contract department of the Commonwealth Edison Company, Chicago, is now with the Forty-first Infantry, Camp Funston, Kan., where he has complete charge of all the electrical equipment, telephones, wireless, etc., and is getting in practice for trench warfare.

* * * *

ALBERT E. CASE, Po. 6768, formerly connected with the New York office and more recently credit manager and cashier of the Boston office of the Western Electric Company, has been appointed credit manager of the Philadelphia branch of that company.

* * * *

H. J. MEYER, Po. 7365, member of the firm of Charles L. Pillsbury, consulting engineers, Minneapolis, Minn., has been appointed engineer of the Minnesota Fuel Administration to act in fuel conservation matters. One of the aims is to utilize all possible power of hydro-electric plants in the state.

* * * *

LIEUT. F. H. WILSON, Po. 6011, who was before his enlistment City Electrician of Winnipeg, Canada, and who for the past two years has been a prisoner in Germany, has now been transferred to Holland, and it is hoped that he will be able to return to Winnipeg as soon as victory is won by the Allies.

* * * *

M. K. FOXWORTHY, Po. 4843, has been appointed general superintendent of the Merchants Light & Heat Company, Indianapolis, Ind. Prior to his appointment, Jovian Foxworthy was manager of the Danville (Ill.) Light, Heat & Power Company, which property was recently acquired by the Indianapolis company.

FRANK G. FROST, Po. 4015V, has recently been transferred from the position of superintendent of the Houston (Tex.) Lighting & Power Company, a position he has held since 1905, to that of superintendent of power for the New Orleans Railway & Light Company, New Orleans, La. Both of the companies are subsidiaries of the American Cities Companies.

* * * *

E. G. HOWARD, Po. 18408, who until recently was connected with the sales department of the General Electric Company in Minneapolis territory, is now associated with the Moloney Electric Company, as district manager, with headquarters at Minneapolis. Jovian Howard is well known in the industry of the Northwest and has had a valuable experience in marketing electrical products.

* * * *

F. A. MANSFIELD, Po. 6360, has resigned after a 12 years' service with the Westinghouse Electric & Manufacturing Company, East Pittsburgh, to become manager of the Pittsburgh office of the Mechanical Appliance Company, of Milwaukee, which company has recently opened offices in a number of cities. Prior to his resignation Jovian Mansfield had been engaged in government work.

* * * *

W. GRAHAM CLAYTOR, Po. 11168, of Lynchburg, Va., has been commissioned a captain in the National Army. Prior to receiving his commission Jovian Claytor was general superintendent of the lighting and power departments of the Lynchburg Tractor & Light Company and the Roanoke Railway & Electric Company, and he has been granted a leave of absence for the duration of his service by the two companies. Capt. Claytor is a graduate of the Virginia Polytechnic Institute, and has been connected with the companies for twelve years.

* * * *

E. P. CLIFFORD, Po. 4198, has been appointed office manager of the engineering department of the West Street, New York City, office of the Western Electric Company. Prior to his appointment, Jovian Clifford was Eastern district manager for the company. He has been connected with the Western Electric Company since 1892, starting as an office boy in the clerical department at New York. Later he served as chief clerk at New York and in the Chicago and Philadelphia offices of the company.

* * * *

T. M. WINSTON, Po. 19021 (formerly it was T. M. Wuerzinger, but that was before our declaration of war against Germany). Jovian Winston was engaged in business at 79 West Monroe St., Chicago. When he enlisted he made application to the Circuit Court of Cook County for permission to change his name, which was promptly granted. Now you will see the sign over the front at 79 West Monroe St. reads "Winston, Inc." At last accounts Jovian Winston was with his regiment at Camp Jackson, Columbia, S. C.

* * * *

C. D. FLANIGEN, Po. 4708, general manager of the Athens (Ga.) Railway & Electric Light Company, was recently elected president of the Southwestern Section of the National Electric Light Association. Jovian Flanigen was born in Philadelphia, and is a graduate of the Polytechnic College of the State of Pennsylvania, with the degree of B. M. E. He became manager of the Athens Gas Company in 1883. In 1894 he entered the newspaper field as business manager of the Athens Daily Banner. Later he became connected with the Athens Railway & Electric Company, advancing from the position of superintendent to that of general manager, the position he now holds.

* * * *

JAMES S. CUMMING, Po. 2169, who for the past 23 years has been president of the Central Telephone & Electric Company, St. Louis, Mo., and E. ALSCHULER, Po. 10863, formerly western manager for the Interstate Novelty Company, and for the past year and one-half sales manager for the American Carbon

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& Battery Works, East St. Louis, Ill., have organized a company to be known as the Ajax Electric Specialty Co., with headquarters in St. Louis. The company has taken over the specialty manufacturing business formerly handled by the Central Telephone & Electric Company. The new firm will confine its efforts at distribution entirely to the jobbing trade.

* * * *

DAN G. FISHER, Po. 2173, assistant to the president, Texas Electric Company, Dallas, Tex., who, incidentally, is in charge of the Jovian Convention publicity, was tendered a reception, which was termed "Flowers for the Living," by the Dallas Advertising League, August 6, the occasion being the official announcement of the election of Jovian Fisher as district vice-president of the Advertising Clubs of the World. Mayor Joe E. Lawther, of Dallas, presented Jovian Fisher with a gold emblem pin, the gift of members of the club, with an appropriate address. A number of other members of the club made addresses during the luncheon.

* * * *

D. A. HEGARTY, Po. 9208, formerly vice-president and general manager of the Little Rock Railway & Electric Company, Little Rock, Ark., has been appointed vice-president of the Western Light & Power Company. His headquarters are at Boulder, Colo. Jovian Hegarty, who was born and educated in Philadelphia, began his career with the Pennsylvania Railroad Company. He was later connected with A. Langstaff Johnston, in charge of electrifying the railways of Pennsylvania. Later he was connected with the Norfolk Railway Company, from which he resigned to become manager of the Railways Company General, from which he was transferred to the managership of the railway and lighting departments of the New Orleans Railway & Light Company. At the convention of 1917 he was elected first vice-president of the Southwestern Electrical & Gas Association.

* * * *

OBITUARY

SERGEANT RICHARD H. STEWART, Po. 12672, who before his enlistment was treasurer of the New York Electric Installation Company, New York, N. Y., and for a number of years previous to his connection with that firm was associated with the Dale Lighting Fixture Company and the Acme Gas & Electric Company, is reported to have been killed in action July 17. Jovian Stewart was identified with the 308th Infantry, which went to France early in the spring.

* * * *

PENALTIES IMPOSED BY FOOD ADMINISTRATION FOR TEN-MONTH PERIOD

MORE than 800 penalties for violation of rules and regulations governing licensed dealers in foodstuffs have been imposed during the past 10 months by the Food Administration. About 150 companies and individuals have been ordered to quit business in licensed commodities for a limited or unlimited period, and over 500 have voluntarily made a money payment, usually to the Red Cross, or have temporarily abstained from doing business rather than risk calling down more drastic penalties upon their heads.

A vast number of other cases have been disposed of by Federal food administrators in the various states and territories under the authority of, but without specific appeal to, headquarters at Washington. In a large number of other cases the desired compliance has been secured without penalty. More than 2,500 cases arising out of the shipment of foods and feeds, many of them perishable, have been disposed of.

Penalties inflicted from the passage of the Food Control Act, August 10, 1917, to June 1, 1918, may be summarized as follows:

Unlimited revocations of license, requiring the licensee to abstain from business in all, or in specified, licensed commodities until further notice, 65, of which 56 are outstanding.

Limited revocations, requiring licensee to abstain from business in all, or in specified, licensed commodities for a definite period, 62, of which 19 are outstanding.

Unlimited unfair orders, directing licensees until further notice not to sell any, or specified, licensed commodities to unlicensed dealers who have engaged in unfair or wasteful practices, 8, of which 3 are outstanding.

Limited unfair orders, of the same effect as those last mentioned, excepting that the prohibition is for a limited period only, 12, of which 9 are outstanding.

Refunds and contributions, consisting of money payments voluntarily made in place of more drastic formal penalties of the above nature, 131.

Temporary suspensions and minor penalties, voluntarily accepted in place of more drastic formal penalties of the above nature, about 375.

Requisitions and forced sales, consisting of food commodities disposed of without resort to drastic formal penalties for hoarding, 24.

Stop orders against the issuance of licenses, either pending investigation of alleged violations of undue delay in applying for a license, or a minor and temporary penalty for offenses committed before a license is issued, of which 103 are outstanding.

* * * *

MAN POWER

WE READ much of man power these days; human power is a better term, because it emphasizes the fact that the women and chlidren also constitute a great factor in this war. In the final victory every man, woman and child in America can and should have a part.

In comparing the man power of Germany with that of the United States it must be borne in mind that a much larger proportion of the manual labor of the man power of the nation is performed, is exerted by the German women than by the women of America. It is said that in peace times the women constituted 42 per cent of the agricultural and industrial labor of Germany. They work in the fields, in the factories, in the mines, at the very hardest and most laborious tasks, doing the work only done by men in this country. With a great proportion of the German men in the army, it is not improbable that women now constitute by far the larger half of German manual labor.

The women of the United States are nobly, unselfishly, manfully, one may say, bearing their share of the burdens of war. By the grace of God and the power and courage of America the fate of the German women is not and will never be theirs. But it will be with their assistance and co-operation and their full assumption of the burdens and duties of the day that the United States is to exert its full power in ridding the world of that intolerable German kultur which makes brute soldiers of the men and slaves of the women.

LIST OF STENTORS

CHIEF STENTORS

FOURTH DISTRICT
ROBERT L. CUNNINGHAM, Po. 4749,
Care J. F. Buchanan & Company, Philadelphia

FIFTH DISTRICT
E. F. MEYERS, Po. 6170,
345 Federal Park Place, Fort Wayne, Indiana

THIRTEENTH DISTRICT
RICHARD F. BEHAN, Po. 9315,
Care Westinghouse Electric & Manufacturing Co., San Francisco, Cal.

SIXTH DISTRICT
GEORGE E. WATTS, Po. 12482
Care Electric Service Supplies Co., Atlanta Ga.

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

The Brand of Toil

By W. R. J.

A MAN to be honest must work,
To render his duty to earth,
He simply can't do it and shirk,
Nor palm off his scheming for worth.
He may think he can trick and deceive,
Or plot to get riches and fame,
He may think other people believe,
But a record is kept of the game.

A man to be honest must toil,
The task that he has is his own;
There is no way on earth he can foil,
The mark of the hand that has sown.
He may harvest the other man's share,
And store it away in a vault,
But the witness who knows it is there
Sits right in his mind with the fault.

He can't take the other man's part
And turn the thing in as his own,
Be he ever so wily and smart,
He will find it is booked as a loan.
He may use it or hoard it away—
The other man's glory or gain,
But he'll find in the end he must pay,
That his effort to claim it was vain.

A man to be honest can't shift
The work that is given him here;
He can't let the other man lift
The burden and then claim a share.
He may take from the other his wage,
And reap where another has sown,
But the record will show on its page
That he never could make it his own.

* * * *

Advice to Beginners

Hooks That Are Baited for the Unwary

BUNK

YOUNG MAN, when you go forth into the cold, unsympathetic world seeking the pot o' gold at the end of the rainbow and the abode of the halo of your youthful dreams, beware of the sweet words that come softly to your ears with the purr of magnanimity and the glossy sound of sincerity, truth and generosity.

Be wary of the lotions of embellishment, sweet-scented with fragrant perfume though they be, for an analysis of many will reveal them to be the concoctions of softsoap. Apply them not to your vanity, nor let them undermine your circumspection, or unduly inflate your aspirations, lest you become obsessed with a preponderance of dignity and an inclination to indulge in premature austerity, or allow your vision to become projected at a point up the mountain of attainment that will not permit you to minutely inspect the pits and sand-dunes that intervene.

At all times take cognizance of Bunk, lest it come upon you when unexpected, pinning upon your vanity a sweet-scented boquet and purloining your angora while you are intoxicated with the aroma.

Beware of the cunning of Bunk when it comes forth from its lair to foretell of your prospects for the future while you apply your energy diligently for a recompense of small change; for then, indeed, does it flatter your vanity and extract the growth from your pay-roll.

Look not upon Bunk with admiration and appreciation when it is smooth and oily with the elucidations of your perfections and talents, for then it is hypodermicing you with an anesthetic for the painless operation of a "touch."

Be not over-credulous of the soft words of Bunk when it has your welfare at heart in proffering you merchandise at cost because of friendship, love or sympathy. Watch it carefully when it opens the door and invites you to step in on the ground floor. Inspect the cost minutely for inflation, and take notice of the ground floor lest there be a trap door that opens into the bottomless pit of nothingness.

Be not eager to gulp down the luscious concoctions of Bunk when it seeks to divert you from that which you know you can do unto the elysian fields of your imaginary talents. Perhaps the dispenser is covetous of your job and ambitiously seeks your self-elimination.

Look upon life as a game rather than a battle, for Bunk has changed its aspect by its subtile strategy.

But above all things play the game straight, with your eyes skinned for the toboggan courses prepared for your sled-runners. Seek to avoid them, and bear diligently in mind that Bunk is a boomerang. He who throws it will find it will return, but the hour and day he may not be able to forecast.

Seek merely to keep in the clear. If there is no ulterior design, the shafts of Bunk will fall harmless; if they are cast from the bow of strategy they will go fluttering back from whence they came for vengeance. For he who deals in Bunk will some day slip upon his own toboggan course, and what then shall stop him but the bottom and the rough sledding at the edge of the slick ice?

* * * *

The Old Dodge

By W. R. J.

I passed a man upon the street,
Who looked me in the eye,
And then he glanced towards my feet,
And then he passed me by.
I spoke to him, but not a word
Did he return to me;
So, naturally, his actions stirred
Me somewhat angrily.
I turned around and shouted back,
"Has something turned your head?"
He gave a start, "Alas, alack!
I fear it has," he said.
"My club has made me promise to
Deliver an address,
And it has made me very blue,
I'm ready to confess.
I've never made a speech at all,
Nor can I turn them down."
Said I, "Why don't you get a call
To take you out of town?"
A look of hope came in his eye,
A smile entwined his lip;
"Good-bye," he said, "Old Top, good-bye,
I thank you for the tip."

ANNUAL FIELD DAYS FOR CO-OPERATORS

THE JOVIAN CONVENTION
DALLAS, TEXAS
OCTOBER 24-26, 1918.

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DATE FOR REJUVENATION DECIDED ON BY MILWAUKEE TRIBUNES AND EXECUTIVE COMMITTEE

AT a meeting of the Tribunes and Executive Committee of the Milwaukee League held in that city August 8, it was decided to hold a Rejuvenation September 10. A campaign was outlined and arrangements perfected to make a drive for a large number of candidates.

The League has lost about 17 members by enlistments and the prospect is that 8 or 10 others will be called for military service in the near future. However, hard work, "Milwaukee style," for a big class of candidates will more than offset the losses.

The directory of the Milwaukee electrical industry recently issued by the League proved to be a big success, and copies of it have been in great demand. The secretary, Frank Ziekursch, Po. 16625, however, still has a supply, and will be glad to distribute them to members on application. The League is certainly to be congratulated on getting out this directory, as it is a great convenience.

In justice to the firms and individuals who donated the prizes at the recent picnic of the League, we wish to state that the prizes aggregated a value of fully $250.00.

The firms to whom the League wishes to express its thanks for their splendid donations are as follows: The Julius Andrae & Sons Company, Gruesil-Quarfot Electric Company, Boggis-Johnson Electric Company, Home Wiring Company, Globe Electric Company, I. R. Douglas, Trester Service Electric Company, Cutler Hammer Manufacturing Company, and the Federal Sign System (electric). The response of the electrical concerns of the city to solicitation for prizes was highly satisfactory.

At the above meeting the following nominations were made for officers of the League to serve during the coming year:

President, F. V. Ziekursch, Po. 16625, Federal Sign System (electric); vice-president, H. E. Brauns, Po. 16618, Home Wiring Company; secretary, A. F. Kiefer, Po. 19976, Mechanical Appliance Company; treasurer, H. H. Tholen, Po. 19091, Trester Service Electric Company. Executive committee: George Kirchgasser, Po. 15436, Cutler Hammer Manufacturing Company; E. W. Timm, Po. 19996, Westinghouse Lamp Company; H. F. Trester, Po. 17656, Trester Service Company; Phil Polacheck, Po. 7367, Charles Polachek & Brother Company. First Tribune, I. R. Douglas, Po. 18360, Mechanical Appliance Company; Second Tribune, A. L. Engel, Po. 18991, Home Wiring Company.

With this personnel of officers, it is felt that a great deal of constructive work can be achieved, and the League is looking forward to increased activities and membership and for a successful year.

* * * *

CLEVELAND HOLDS OUTING

THE annual outing of the Cleveland League was held at Nela Park, near that city, on the afternoon of August 3. The park, which is the property of the National Lamp Works, possesses every desirable facility for an enjoyable outing. It has a splendid swimming pool, baseball grounds, tennis courts, golf courses, dancing pavilion and other facilities.

Members of the League began to arrive about one o'clock p. m. and by a little after 1:30, about 200 members and their families were in attendance.

An interesting program had been arranged, consisting of athletic sports, and games of various kinds.

The most exciting contest was the baseball game, umpired by Past President of the League, Norman Anderson, Po. 19044, and arbitrated by League President H. L. Schneider. We mention these members particularly because of the strenuous activity required of them to discharge the important functions of their offices. The latter officiated as scorekeeper, and was borne from the field completely exhausted at the conclusion of the game, while the former was recuperated by first-aid treatment, and it is hoped will experience no serious results from his overtaxed efforts.

The party enjoyed among other features a basket dinner, following which the evening was spent at the dancing pavilion.

* * * *

ANNUAL OUTING AND PICNIC WILMINGTON, DEL., JOVIAN LEAGUE

MORE than 400 Jovians, their friends and relatives, were in attendance at the annual picnic of the Wilmington, Del., League, held at Washington Heights Park on the afternoon of July 13. The affair proved to be one of unusual interest. There was a splendid collection of valuable prizes awarded the winners of the various contests, and the competition in all the games and races was very keen.

Field Scene—Wilmington Outing.

Included among the contests was, first, a lean man's race. This was followed by a fat man's race, one hundred-yard dash, secret time race, sack race, potato race, ball-throwing contests, and numerous other events.

There was also a ball game between the married and single men which resulted in a tie.

Prizes—Wilmington Outing.

The following chairmen of the committees were in charge of the affair: General Committee, C. J. Schaeffer, Po. 2252; Prize Committee, W. A. Dannenhauer, Po. 20019; Finance Committee, A. D. Smith, Po. 20033; Transportation, W. A. Heindle, Po. 20025; Location Committee, W. P. Bardo, Po. 20366; Publicity Committee, W. A. Briggs, Po. 20655; Refreshment Committee, Robert S. Glover, Po. 20022.

A Rejuvenation is planned to be held early in the fall, and it is felt that the splendid success of the outing will have the effect of aiding greatly in procuring a large list of candidates.

Among other activities planned is a fishing trip for members. Although the date has not been set, it will probably be held in the early part of September.

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IXIELAND"
ER PLANTATION

October 24, 25 and 26, 1918

ORDER

al Convention

PLEASURE

PROGRAM (Preliminary)

Note: All entertainments have been provided with the full knowledge that this is war-time and that this is a **Victory Convention.**

Thursday, October 24th

Morning: Attend the convention.

Afternoon and Evening: Dallas Country Club.
Smoker
Dancing
Putting
Swimming
Vaudeville

This is a general "get-together" and "know-each-other" day. Do your part.

Friday, October 25th

Morning: Attend the convention.

Afternoon and Evening: Dallas Country Club.
Automobile Ride to Love Field, where the flyers will pull off some hair-raising stunts.
Theatre Party for the ladies.

Evening: ANNUAL REJUVENATION. The best degree team procurable in the United States will have charge of this.

Saturday, October 26th

Morning: Attend the Convention.

Afternoon and until ———: The **Old Bonner Plantation has been procured** for an afternoon and **Night in Dixieland.**

NVENTION

the "OLD BONNER PLANTATION," has been rented. Here fo' de War." Here will be found Ol' Mis' and Ole Marster, and tched from the fading remnant of "cullud" people of olden times, precious, and only old and gone."

we say: "Come Back Home!"

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AMERICAN AND GERMAN FINANCES

PESSIMISTIC Americans who view with alarm our increasing national obligations may derive a great deal of comfort from a comparison of the financial condition of the United States contrasted with that of Germany.

The total resources of the United States are estimated at about $250,000,000,000; our annual earnings are estimated at about $50,000,000,000. Our national debt, including the third liberty loan, may be put around $12,000,000,000.

Before the war our Government was spending about $1,000,000,000 a year. When the war is ended, interest charges, less the interest collected from our loans to our allies, Government insurance expenses, and other necessary expenditures growing out of the war may conservatively be estimated at something like $1,000,000,000. We are confronted, therefore, when peace comes, with raising only a couple of billions a year revenue, a slight task for a nation of such tremendous wealth, capacity, and resources.

The resources of Germany before the war were estimated to be $80,000,000,000. The annual expenditures then of the Imperial Government were about $800,000,000. Her debt now is $30,000,000,000, and her resources and man power have been seriously impaired. After the war she is confronted with additional expenditures growing out of the war totaling some $4,000,000,000.

The interest of her war debt, even if the debt grows no larger, will be about $1,500,000,000. Although she is niggardly in her pensions to private soldiers and their families, $1,000,000,000 a year would hardly suffice to pay even small pensions to her injured and the families of her soldiers who have been killed. Her war debt must be paid some time, and a sinking fund of five per cent would add $1,500,000,000 to her annual taxation. Here is a total increase of $4,000,000,000, all due to the war.

Of course both the United States and Germany may greatly increase their debts, but the increases will not change the relative situations.

The German Government has drained the German people of their gold, even their jewels and heirlooms, and yet the Imperial Bank of Germany now has but little over $500,000,000 of gold in its vaults. The United States has made no special effort to obtain gold, has made no call upon the people for the precious metal, and yet today has in its Treasury vaults practically $2,500,000,000 of gold coin and bullion.

* * * *

THE PART THAT CIVILIANS PLAY IN THE WAR

SEPARATED by 3,000 miles of ocean and protected by our navy, our civilian population can during this war continue to live in the same security as in peace times. The Hun invaders are not in our midst. We are spared the agony that came to the women and children and old men of Belgium and France and Serbia and the other overrun countries. While thus secure from harm we must not forget that the civilian populations of these desolated countries are as much our allies as are their fighting men. Let us realize more deeply their tragedies.

Read this testimony of Brand Whitlock, who as our minister to Belgium knows what it means for a land to be occupied by German troops:

"Tamines is a little mining town on the Sambre. The little church stands on the village green overlooking the river, its facade all splotched where the bullets and grapeshot spattered against it. And in the little graveyard beside the church there are hundreds of new-made graves, long rows of them, each with its small wooden cross and its bit of flowers. The crosses stand in serried rows, so closely that they make a very thicket, with scarcely room to walk between them. They were all new, of painted wood, alike except for the names and the ages—thirteen to eighty-four. But they all bore the same sinister date—August 22, 1914.

"The Germans began to pillage and burn the houses, 676 of them; then they turned all the inhabitants into the street, promiscuously marching them about. It went on for long hours; they were given no food or drink. During a halt they forced them to lie beneath the machine guns, then they lined them up against the church wall and performed a mock execution. About 600 men were massed in St. Martin's Square, on the river bank, and their wives, mothers, daughters, were assembled by the soldiers to witness the scene.

"They lined up their victims in three rows along the Sambre and tumbled 150 of them head over heels into the river, shoving back with their bayonets those who attempted to cling to the bank. Only four or five escaped by swimming. During this first execution the machine guns were trained on the remaining lines. When the firing had ceased that night, there were more than 400 dead; their bodies lying there, women, too, and children. And the graves are there near by, in the cemetery, and the ages given are from 13 to 84."

The part that these civilians played in the war was to bring to the civilized world the realization of what it would mean for German arms to conquer. In playing their part they gave their lives in the most cruel way a beastly enemy could devise.

What part will our civilian population play in the war? Will it go along living as it did before the war, or will it glory in the opportunity to serve in the tremendous task of defeating civilization's enemy? Each individual must decide that question. He can prolong the world's agony or he can save—save and sacrifice—to the utmost of his ability and with his savings buy War Savings Stamps that there may be more money, labor, and materials to back up those who fight and die not only for us, but for all who love freedom.

* * * *

Coming Conventions

Association of Iron and Steel Electrical Engineers
Annual convention, Southern Hotel, Baltimore, Md., September 9–14. Secretary, John F. Kelly, McKeesport, Pa.

Northwest Electric Light and Power Association
Affiliated with N. E. L. A. Annual convention, September 11, 1918. Secretary, George L. Myers, Pacific Power & Light Company, Portland, Ore.

Michigan Section, N. E. L. A.
Annual convention, Pantlind Hotel, Grand Rapids, Mich., September 17 and 18. Secretary-treasurer, Herbert Silvester, Monroe, Mich.

International Association of Municipal Electricians
Annual convention, Atlanta, Ga., September 24–27. Secretary, Clarence R. George, Houston, Tex.

New England Section, N. E. L. A.
Annual meeting, Hotel Kimball, Springfield, Mass., September 27 and 28. Secretary, Miss O. A. Bursiel, Boston, Mass.

American Electrochemical Society
Fall meeting, Princeton, N. J., September 29 to October 1. Secretary, Prof. J. W. Richards, Lehigh University, Bethlehem, Pa.

American Electric Railway Association
Annual meeting, Atlantic City, N. J., October 8 and 9. Secretary, E. B. Burritt, 8 West Fortieth Street, New York City.

Illuminating Engineering Society
Annual convention, New York City, October 10. General secretary, Clarence L. Law, Irving Place and Fifteenth Street, New York, N. Y.

Jovian Order
Annual convention, Dallas Tex., October 24-25-26. Mercury, Ell C. Bennett, 1415 Syndicate Trust Building, St. Louis, Mo.

Kansas Public Service Association
Annual meeting, Kansas City, Kan., October 17–19. Secretary-treasurer, W. W. Austin, Cottonwood Falls.

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DEHYDRATING PLANT AT MARYLAND WAR FOOD BUREAU

A MODERN dehydrating plant has been installed at the War Food Bureau in Baltimore, Md., to take care of the crops from the war gardens of the State. Daily demonstrations are being given, and it will soon be put on a commercial basis. It will reduce vegetables three or four-fifths of their volume by the simple process of drawing out the water content, which in some vegetables is in greater proportion than even in milk.

The demonstrations being conducted at Baltimore show how simple dehydrating plants can be constructed on any farm with a few little chicken-wire trays, a small stove, and the help of a young girl or boy.

* * * *

SOLDIER AND SAILOR INSURANCE

SO FAR more than 3,000,000,000 Government checks have been sent out by the Bureau of War Risk Insurance, most of which were for allotments and allowances to the families and dependents of the enlisted men in the army and navy. The total disbursements of the bureau up to June 10 were more than $98,000,000, of which $97,000,000 was for allotments and allowances.

More than 850,000 checks a month are sent out, approximately 35,000 being mailed out every day. The first checks for the June allotments were sent out on July 1, just as the first May payments began on June 1. Relatives and dependents of the insured men should remember that the payments for any month can not be mailed out sooner than the first day of the succeeding month.

* * * *

IMPROVED ACCOMODATIONS AT WASHINGTON

THE United States Civil Service Commission announces that it is now in a position to state definitely to the public that steps will at once be taken to relieve the congested living conditions in Washington, which have been an obstacle in the way of recruiting the civil service to meet war needs. The commission is advised by the Department of Labor that the erection of temporary hotels and restaurants, to be conducted under Government supervision for the use of Federal employees in Washington, will begin about July 1.

Ready Early in September

It is expected that the first units will be ready for occupancy early in September. Accommodations will at first be provided for approximately 5,000 persons. Additional accommodations will be provided as they are needed. Each room will be arranged for the occupancy of but one person. In the meantime the room registration office, which is conducted by the District of Columbia Council of Defense under the auspices of the Council of National Defense, is able to provide rooming and boarding accommodations for the new appointees. At the latest report the room registration office had on its lists more than 5,000 rooms which had been inspected and found available for Government employees.

Booth at Union Station

Those who arrive on late trains may find accommodations for the night by applying at the booth of the District Council of Defense, which is prominently situated in the Union Station, where all trains arrive.

* * * *

Jovians, Attention!

THE Attendance and Invitation Committee of the Jovian Home-Coming Convention, at Dallas, Tex., October 24-25-26, is busily engaged preparing for your reception. The entertainment features listed below are being provided, and in order to assist us in providing ample transportation and reservation facilities we request you to give us the following information:

Can we depend on your attendance? ..... ☐
How many visitors will be with you? ..... ☐
How many lady visitors? ..... ☐
Shall we reserve hotel accommodations for yourself and party? ..... ☐
Will you participate in and attend the entertainment features listed below? ..... ☐

(Check those you will attend.)

Golf game at Dallas Country Club each day ..... ☐
Automobile excursion to Aviation Field and other points of interest, first afternoon ..... ☐
Reception and Dance at Dallas Country Club, evening first day ..... ☐
Rejuvenation, evening of second day ..... ☐
Picnic, Kirkland Park, 3 p. m., third day ..... ☐
"Night in Dixie Land," and Barbecue, evening third day .... ☐
What will be the time of your arrival? .....
What train? .....

Address A. Hardgrave, Po. 20609, Chairman, 1302 Southwestern Building, Dallas, Tex.

DALLAS CONVENTION HOTEL RESERVATIONS

IMPORTANT

SEND IN THIS BLANK WITHOUT DELAY

Hotel Rates	Adolphus Hotel Convention Headquarters	Oriental Hotel	Southland Hotel
Single Room, Without Bath	$1.50 UP	$1.50 UP	$1.50 UP
Double " " "	2.50 "		2.50 "
Single " With "	2.00 "		2.00—2.50
Double " " "	3.00 "	2.00 "	3.50—4.00

Please Reserve For Me _____ Rooms
Rate _____ Per Day for the Dates of
October _____, at the
Hotel _____

Yours Truly,

FILL IN, SIGN THIS COUPON AND MAIL TO **A. HARDGRAVE, PO. 20609,** CHAIRMAN HOTEL COMMITTEE, 1302 SOUTHWESTERN BUILDING, DALLAS, TEXAS.

MAIL AT ONCE TO INSURE RESERVATION.

NAME _____ PO. _____

ADDRESS _____

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FACTS—

PROOF OF THE CLAIMS WE HAVE

ACTUAL SAVING TO THE MEMBERSHIP IN THE MATTER OF PREMIUMS

Jovian Insurance in Force August 15, 1918

	Policies	Amt. of Ins.	COST (Premium)	SAVING
Accident	348	$2,185,000.00	$5,015.00	$5,470.00
Health	218	570,000.00	4,560.00	3,420.00
	566	$2,755,000.00	$9,575.00	$8,890.00

This same amount of insurance at standard rates would have cost the policy holders per year $18,465.00

Percentage of saving on accident policies alone ($5,470.00) compared with the actual cost ($5,015.00)..... 109%

Percentage of total saving ($8,890.00) compared with total actual cost ($9,575.00) 92%

Percentage of saving on Jovian Health Insur. ($3,420.00) compared with actual cost ($4,560.) 75%

Percentage of saving ($8,890.00) compared with cost, at standard rates ($18,465.00)..... 48%

Clip and Mail the Coupon Today

Net Saving to the Policy Holders
Cash Benefits Received by the

If you so desire, date your application to take effect when some of your present insurance expires—pay not until you receive the policy

THE JOV
SYNDICATE TRUS

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—FACTS

IADE FOR JOVIAN INSURANCE

CASH PAYMENTS MADE TO JOVIANS IN THE WAY OF BENEFITS

Jovian Insurance Claims Paid

1 Death	$5,000.00
15 Accident	898.83
18 Illness	623.16
Total	$6,521.99

The Proof of this Pudding lies in the hearty appreciation registered by the participants, one of whom writes—

"Attached is your receipt covering remittance of $35.71.

"Your courtesy and promptness in settling the matter is surely commendable.

"I wish more Jovians were availing themselves of the merits and service ideals back of Jovian Accident and Health Policies."

.....	$ 8,890.00
nsured	6,521.99
otal Gain	$15,411.99

N ORDER

ILDING ST. LOUIS

Every dollar you invest in Jovian Insurance, releases nearly another dollar for your other pressing needs

Sign—Tear Out—Mail NOW!

THE JOVIAN ORDER

GENTLEMEN:

Send me complete information relative Jovian Accident and Health Insurance at greatly reduced rates.

(Signed).....

(Address).....

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JOVIANS!

Can You Use Any of These Jobs?

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, ar seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau. A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of any of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

---

281. Draftsman. Chance for advancement with Philadelphia switchboard manufacturer.

282. Wireman. Armature Winders Motor Winders Stock-Keeper — Illinois public service company is in need of all these classes of help.

283. Salesmen. Large electrical jobbing house can use one man in Cleveland and one for outside territory; men wanted preferably under 35 years of age.

284. Purchasing Agent. Attractive opening with Milwaukee jobber for man familiar with electrical and mechanical lines.

284-A. Accountant. Milwaukee jobbing house will give good salary and chance for advancement to man with ability to make good.

285. Salesmen. West Virginia power company is looking for men familiar with sale of current for both lighting and heating, especially for electric ranges.

286. Engineers. Shift engineers wanted in Ohio power plant having 7500 K. W. turbine capacity and 1000 K. W. direct current; $160 per month.

287. Salesmen. Machinery house has opening for two salesmen acquainted with electrical equipment, one for Chicago and one for Milwaukee.

288. Salesmen. Chicago electrical concern has opening for right man now.

289. Engineers. $75 for eight-hour shift, in ice, electric and waterworks; Oklahoma City.

290. Salesmen. Detroit electrical supply house can place men for Michigan and Ohio territory.

291. Purchasing Agent. Personal correspondence solicited by Chicago electrical concern.

292. Salesmen. Four attractive territories open with large electrical specialty manufacturer.

293. Bookkeeper. Wisconsin electrical jobbing house can use a good, capable man.

294. Secretary. Attractive opening for young man with local electrical contractors' association in large Ohio city; $125 per month.

295. Bookkeeper. Attractive opportunity for man capable of handling an office force and of developing into an executive; good salary.

296. Salesman. Man wanted to sell flashlights in several Western States.

297. Electric Engineers. Large Eastern lamp manufacturer has place for several capable men.

298. Detail Man. $125 per month to office man familiar with pricing and quotations. Good chance for advancement.

299. Stockman. Ohio electrical manufacturer has need of experienced stockkeeper.

300. Salesman. Desk job for man accurate at figures and familiar with detail and correspondence; good future.

301. Linemen. Two men wanted ($85 to $100 per month who can be advanced to foremen.

302. Chemical Engineer Mechanical Engineer Store Keeper — Large steel company is in need of all these classes of employes.

303. Electrician-Lineman. $100 per month to combination man, in Kansas.

304. Shipping Clerk. Experienced man wanted on Pacific Coast; not subject to draft.

305. Wiremen. North Carolina power company can use several; $4 per day and advance as soon as proficiency shown.

306. Linemen. Oklahoma light and power concern wants men familiar with meters, transformers and outside construction work.

307. Salesmen. Three openings; Minnesota, Iowa, South Dakota and Nebraska territory; for men above draft age.

308. Salesmen. Wisconsin public service company needs men to sell gas and electric appliances for newly opened commercial department.

309. Sales Manager. Attractive opening with large Northern electrical concern; first-class man wanted.

310. Salesman. Indiana electrical supply house wants man, devoting ether entire or part time to sell desk lamps, decorative fixtures, etc., on commission.

311. Salesman. Good salary to man who is acquainted with motor trade to sell new, second-hand and rebuilt motors in large Southern city. A combination man who can buy as well as sell is desired.

312. Salesmen. Ten specialty men wanted to sell an auto device through North and West.

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EMPLOYERS
CAN YOU USE ANY OF THESE MEN?

Do You Need

AN EXECUTIVE, SALESMAN, SUPERINTENDENT, ENGINEER OR OTHER EMPLOYE?

WE PUBLISH below a list of more than 100 applications now on file with our Employment Bureau, giving the number under each classification and a limited statement of the specifications. Among these you will surely find the man to fill the place you have open. Let us know your requirements, and we will take pleasure in putting the applicants in touch with you promptly. Address The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

CLASSIFICATION	No. on File	Age	Qualifications	Experience	Salary Wanted	Location
Advertising Managers	3	23–29	H. S.-College	2–8 yrs.	$150–250	Anywhere
Bookkeepers	2	26–35	High School	5–14 yrs.	$65–100	Anywhere
Central Station Engineers	3	29–38	H. S.-Univ	6–18 yrs.	$60–200	Anywhere
Clerical	3	22–24	High School	2–10 yrs.	$75–125	Anywhere
Commercial Laboratory Workers	1	29	Tech. School	11 yrs.	.....	Anywhere
Construction Engineers	3	28–46	H. S.-Univ	2–27 yrs.	$100–200	Anywhere
Electricians	1	30	H. S.-Univ	3 yrs.	$100	Anywhere
Electrical Engineers	5	30–38	Practical-Univ.	5–12 yrs.	$125–300	Anywhere
Engineers	5	28–40	Practical-Univ.	5–12 yrs.	$125–300	Anywhere
Estimators	3	28–36	Practical	9–18 yrs.	$125–160	Anywhere
Foremen	2	27–34	Practical	9–16 yrs.	$125–160	Anywhere
General Managers	3	31–38	Practical	7–15 yrs.	$250–417	Anywhere
Linemen	1	22	High School	5 yrs.	$90	Anywhere
Managers, Commercial Department	2	34–35	Practical	12 yrs.	$250	Anywhere
Managers, Contracting	2	26–36	College	5–16 yrs.	$125	Anywhere
Managers, Jobbing House	2	32	College	13 yrs.	$2,400-10,000	Anywhere
Managers, Office	3	26–34	High School	8–10 yrs.	$100–250	Anywhere
Managers, Plant	11	30–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere
Managers, Traffic	1	53	Practical	15 yrs.	$200	Anywhere
Manufacturers' Representatives	4	36–38	Practical-Tech.	8–10 yrs.	Com.–$200	Anywhere
New Business Managers	2	29–34	H. S.-Univ.	9–15 yrs.	$125–175	Anywhere
Office Executives	2	25–32	Grade-Univ.	4–18 yrs.	$85–150	Anywhere
Power Salesmen	1	36	Tech. Grad	12 yrs.	$200	Anywhere
Purchasing Agent	6	24–41	Grade-Tech	4–21 yrs.	$125–200	Anywhere
Sales Engineers	3	39–45	College–Univ.	9–20 yrs.	$100–200	Anywhere
Sales Managers	6	28–41	H. S.-Univ.	4–17 yrs.	$150–300	Anywhere
Salesmen	27	24–43	H. S.-Univ.	2–25 yrs.	$75–300	Anywhere
Superintendents	10	28–44	H. S.-Univ.	3–15 yrs.	$125–300	Anywhere
Telephone Engineers	1	35	H. S.-Tech.	15 yrs.	$200	Anywhere
Welder (Acetylene)	1	33	High School	5 yrs.	$150	Anywhere
Wiremen	2	23–25	High School	7–9 yrs.	$75–125	Anywhere

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BISCHOFF, W. E., Po. 3190, care W. N. Matthews & Bro.....Chicago, Ill.
CARPENTER, JOHN, Po. 1320, care Corsicana Gas & Electric Co..Corsicana, Tex.
CHASE, SAMUEL A., Po. 4424, care Westinghouse Electric & Manufacturing Co.....East Pittsburgh, Pa.
CRONINGER, C. R., Po. 9624-60V, care General Electric Co.....St. Louis, Mo.
DALY, DAVID, Po. 366-V, care Houston Electric Co.....Houston, Tex.
DOWNS, B. M., Po. 2508, care Hemingway Glass Co.....Covington, Ky.
ELKAS, I., Po. 9931, care Robbins & Myers.....St. Louis, Mo.
GUARDIA, A. A., Po. 2657, 4447 Magnolia Ave.....Chicago, Ill.
HAND, WILLIAM, Po. 796, care General Electric Co.....Kansas City, Mo.
HAWKINS, R. V., Po. 11619, care Appleton Electric Company.....St. Louis, Mo.
HEAD, W. B., Po. 139-108, care Texas Power & Light Co.....Dallas, Tex.
HERSTEIN, W. R., Po. 765V, care Electric Supply Co.....Memphis, Tenn.
HICKOX, NORMAN B., Po. 7881, care National X-Ray Reflector Co., 235 West Jackson Blvd.....Chicago, Ill.
HILL, G. W., Po. 1271, 29 West Thirty-Ninth St.....New York, N. Y.
HOLCOMBE, W. P., Po. 901V, care Builders Exchange.....Minneapolis, Min
JENNINGS, O. A., Po. 226, care Southwest General Electric Co.....Dallas, Tex
LAUDERBACH, F. E., Po. 11655, 917 Pine St.....St. Louis, M
LEWIS, P. LLOYD, Po. 6018V, care Wagoner Electric Company.Kansas City, Mo
MARTIN, CHARLES L., Po. 176-56V, care Electric Specialty Co.....Dallas, Tex
RAMIER, J. F., Po. 10604, care Memphis Cons. Gas & Electric Co. Memphis, Tenn
SERVA, A. A., Po. 425, 2420 Hoagland Ave.....Ft. Wayne, Ind
TUTTLE, W. B., Po. 1031, care San Antonio Traction Co.....San Antonio, Tex
VOGAN, W. G., Po. 15974, care Northern Electric Co.....Winnipeg, Man
VOGEL, J. C., Po. 2254-32V, Fifty-Ninth and Woodland Ave...Philadelphia, Pa
WADDINGTON, E. H., Po. 5176, care Western Electric Co.....St. Louis, M
WAKEMAN, J. M., Po. 524, 29 West Thirty-Ninth St.....New York, N. Y.
WILCOX, E. A., Po. 6830V, 1819 Eye St.....Washington, D. C.

JOVIAN STATESMEN

ALABAMA
MATTHEWS, H. W., Po. 4476, care Burgoon-Matthews Electric Co..Birmingham

ARIZONA, CALIFORNIA, NEVADA
SPERRY, LEWIS E., Po. 9415, care New York Insulated Wire Co...San Francisco

ARKANSAS
GRIFFITH, C. J., Po. 13901, care Little Rock Railway & Electric Co..Little Rock

CONNECTICUT
HOLMES, T. L., Po. 3046, care Western Electric Co.....West Haven

GEORGIA
COLLIER, RAWSON, Po. 4458, care Georgia Railway & Power Co.....Atlanta

IDAHO
KIERSTED, EARNEST C., Po. 10258, care Idaho Power Co.....Twin Falls

ILLINOIS
SPAKE, L. C., Po. 15397V, care Western Editor McGraw-Hill Publishing Co.....Chicago

INDIANA
LEE, WALLACE O., Po. 11440, care Indianapolis Light, Heat & Power Co.....Indianapolis

KENTUCKY
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville

LOUISIANA
PORTEOUS, W. A., Po. 9226, care Western Union Telegraph Co.....New Orleans

MASSACHUSETTS
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston

MICHIGAN
CAVANAUGH, J. A., Po. 11199, care Benton Harbor & St. Joe Ry. Co. Benton Harbor

MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA
VILETT, W. H., Po. 3675V, care Sterling Electric Co.....Minneapolis

MISSOURI
JOHNSON, FRED, Po. 177V, care Wagner Electric Manufacturing Co.....St. Louis

NEBRASKA
ZIMMAN, I. B., Po. 1411, care Omaha Electric Light & Power Co.....Omaha

NEW HAMPSHIRE
BURLEIGH, C. B., Po. 398, care General Electric.....Boston, Mass.

NEW JERSEY, DELAWARE
HOWLETT, C. A. S., Po. 279.....Elizabeth

NEW MEXICO
SHEPARD, J. A., Po. 16106, care Deming Ice & Electric Co.....Deming

NEW YORK
HINES, E. G., Po. 16222, care Electrical World, 239 West Thirty-Ninth St.....New York

OHIO
P. B. ZIMMERMAN, Po. 7305V, care National Electric Lamp Association, Nela Park.....Cleveland

OKLAHOMA
MCCALLUM, CHARLES, Po. 3394, care Western Electric Co.....Oklahoma City

PENNSYLVANIA
CRISS, GEO. H., Po. 3364.....Pittsburgh

RHODE ISLAND
DAVENPORT, E. R., Po. 8019, care Narragansett Electric Light Co....Providence

SOUTH CAROLINA
FULLER, W. W., Po. 16462, care Isle of Palms Traction Co.....Charleston

TENNESSEE
WATSON, C. J. R., Po. 2131V, care Electric Supply Co.....Memphis

TEXAS
CLARK, HIRAM O., 6629, care Houston Lighting & Power Co.....Houston

UTAH
TALMADGE, CHARLES H., Po. 1431, care Western Electric Co.....Salt Lake City

VERMONT
LARRABEE, E. E., Po. 1145, care Twin States Gas & Electric Co.....Bennington

VIRGINIA
SEILER, GUY E., 7479, care Virginia Railway & Power Co.....Richmond

WEST VIRGINIA
POWERS, W. R., Po. 2784, care Consolidated Heat, Light & Power Co..Huntington

WISCONSIN
GOLIN, CARL, Po. 12385V, care Northwestern Storage Battery Co....Milwaukee

PROVINCE OF ALBERTA
RICHARDS, NORMAN S., Po. 8985, care Northern Electric Co.....Calgary

PROVINCE OF MANITOBA
SCHUMACHER, J. H., Po. 1742, care Schumacher-Gray Co., Ltd.....Winnipeg

PROVINCE OF QUEBEC
HYDE, E. N., Po. 1614, care Northern Electric & Manufacturing Co...Montreal

FIRST AND SECOND TRIBUNES

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MATTHEWS, H. W., Po. 4476, First Tribune, care Burgoon-Matthews Electric Co.....Birmingham

ARIZONA
*HOWLAND, JOHN, Po. 18686, First Tribune, care Globe Light & Power Co...Globe

ARKANSAS
RUSH, J. C., Po. 1556V, First Tribune, care Rush Bros.....Hot Springs
(*Nicholas Lund, Po. 17257, Second Tribune)

CALIFORNIA
*FAGG, J. H., Po. 12212, First Tribune, care Pacific Gas & Electric Co. .Stockton
(*A. F. Flanagan, Po. 12213, Second Tribune)
GOULD, T. A., Po. 18057, First Tribune, care Redondo Home Telephone Co.....Redondo Beach
*LANDIS, H. G., Po. 288, First Tribune, care Landis Electric Co., 941 8th St.....San Diego
(*H. B. Steventon, Po. 14643, Second Tribune)
(Henry Mellman, Po. 9392, Second Tribune).....Oakland
*NIGHTINGALE, E. L., Po. 18072, First Tribune, care General Electric Co., 724 Spring St.....Los Angeles
(F. J. Airey, Po. 1266, Second Tribune)
*ROWE, A. E., Po. 995, First Tribune, care Telephone Electric Co..San Francisco
*(Edwin R. Brown, Po. 7715, Second Tribune)
*TOBEY, J. O., Po. 12226, First Tribune, care Pacific Gas & Electric Co. Sacramento
(*H. F. Schultz, Po. 14914, Second Tribune)

COLORADO
*BURNITE, T. B., Po. 3426V, First Tribune, Boston Bldg.....Denver
(*H. S. Sands, Po. 1708, Second Tribune)
PAUL, CLARENCE M., Po. 4942, First Tribune, care Trinidad Gas & Electric Supply Co.....Trinidad

DELAWARE
*SHELTON, H. E., Po. 14400, First Tribune, care Wilmington & Philadelphia Traction Co.....Wilmington

DISTRICT OF COLUMBIA
*CARROLL, H. R., Po. 1794, First Tribune, 714 Twelfth St.....Washington

GEORGIA
(Geo. E. Watts, Po. 12482, Second Tribune).....Atlanta

IDAHO
DOVERY, C. G., Po. 10241, First Tribune, care Idaho Power Co.....Twin Falls
(J. O. Blackstone, Po. 15318, Second Tribune)

ILLINOIS
BAUM, B. E., Po. 19260, First Tribune, care Vermillion County Telephone Co.....Danville
BROWN, EDWIN C., Po. 5278, First Tribune, care Galva Electric Light Co...Galva
(Chas. E. Broderick, Po. 1154, Second Tribune).....East St. Louis
GREEN, WM. A., Po. 13279, care Green Electric Co., 315 South Jefferson St..Peoria
(Jas. R. Downs, Po. 13277, Second Tribune)
KETTRON, C. W., Po. 16416, First Tribune, President, Illinois Elect. Porc. Co.....Macomb
(James R. Massey, Po. 8939, Second Tribune).....Springfield
MORSE, CHESTER A., Po. 14611, First Tribune, care Central Public Illinois Service Co.....Mattoon
(Donald R. Truax, Po. 14617, Second Tribune)
*NELSON, A. L., Po. 15384, First Tribune, care Commonwealth Edison Co.Chicago
(*W. H. Colman, Po. 3040V, Second Tribune)

INDIANA
HARRIS, A. B., Po. 14154, First Tribune, 570 Washington St.....Gary
*LOUTH, M. E., Po. 16419, First Tribune, care Globe Stove & Range Co.Kokomo
*VICTOR, H. R., Po. 4857, First Tribune, care Varney Electrical Supply Co., 235 South Meridian St.....Indianapolis

IOWA
*ABELL, C. S., Po. 3952V, First Tribune, 419 Main St.....Keokuk
FLACK, FRANK W., Po. 13979, First Tribune, care Iowa Ry. & Light Co.....Coon Rapids
MCINNERNEY, B., Po. 1400, First Tribune, care Kimball Bros. & Co.Council Bluffs
(E. S. Damon, Po. 1398, Second Tribune)
MURPHY, J. E., Po. 15800, First Tribune, care Murphy-Dunham Co., Sioux City

KANSAS
*CARR, J. E., Po. 16506, First Tribune, 445 S. 7th St.....Salina
(*M. L. Derge, Po. 9616, Second Tribune)
HUBBARD, HARVEY B., Po. 17623, First Tribune, care Hubbard Electric Co.....Beloit
*MAGRUDER, H. W., Po. 15816, First Tribune, care Liberal Light, Ice & Power Co.....Liberal
*WADSWORTH, W. A., Po. 7249, First Tribune, care Kansas Gas & Electric Company.....Wichita
*WRIGHT, E. A., Po. 15827, First Tribune, care Great Bend Water & Electric Co.....Great Bend

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ERRY, D. EARLE, Po. 8245, First Tribune, care Ruby House.....Owensboro
C. C. Childers, Po. 15494, Second Tribune).....Louisville

LOUISIANA

OUBERT, W. C., Po. 16467, First Tribune, 409 Main St.....Baton Rouge
EVY, FERDINAND, Po. 6696, First Tribune, care Interstate Electric Co.....New Orleans
*T. N. Lide, Po. 3925, Second Tribune)
WANN, L. A., Po. 2730-100, First Tribune, care Lake Charles Railway & Light Company.....Lake Charles
*J. A. Landry, Po. 127, Second Tribune)
NILLIAMS, J. A., Po. 5053, First Tribune, care Southwest Gas & Electric Co.....Shreveport
H. E. Cahn, Po. 13025, Second Tribune)

MARYLAND

(Stanley B. Prather, Po. 1650, Second Tribune).....Baltimore

MASSACHUSETTS

Kurt R. Sternberg, Po. 7612, Second Tribune).....Springfield

MICHIGAN

AVIS, C. J., Po. 10086, First Tribune, care Southern Michigan Light & Power Co.....Morenci
BURCHARD, C. A., Po. 19049, First Tribune, care B. H. & St. Joe Ry. & Light Co.....Benton Harbor
(*Earl Frakes, Po. 15528, Second Tribune)
CUDAHY, J. D., Po. 16321, First Tribune, care Consumers Power Co. Kalamazoo
(*L. W. Brown, Po. 16319, Second Tribune)
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St.....Traverse City
MCCLOY, A. S., Po. 11051, First Tribune, care Stevenson Hotel.....Detroit
*J. T. Pearson, Po. 11210, Second Tribune)
MARBLE, CHARLES M., Po. 13961, First Tribune, 67 College St.....Battle Creek
(*L. R. Greusel, Po. 10918, Second Tribune)
SCHAGANE, P. F., Po. 13871, First Tribune, 617 South Saginaw St.....Flint
(L. G. Copeman, Po. 7219, Second Tribune)
THORNE, JOHN J., Po. 14749, First Tribune, care Thorne Electric Co...Bay City
(*Samuel Ball, Po. 19542, Second Tribune)
TROMBLEY, GEORGE, Po. 14750, First Tribune, care Trombley Electric Co., 130 N. Jefferson St.....Saginaw
(*A. B. Brow, Po. 14737, Second Tribune, 228 South Weadock Ave.)... Saginaw
WATSON, GEO. H., Po. 12848, First Tribune, care Consumers Power Co., 124 Monroe St.....Grand Rapids
(R. H. Vandermass, Po. 16484, Second Tribune)

MINNESOTA

ANDERSON, EMIL, Po. 7805, First Tribune, 239 Plymouth Building. Minneapolis
*Paul Joyslin, Po. 1254, Second Tribune)
GRIMES, W. A., Po. 761, First Tribune, care Northern Electric Co.....Duluth
(*F. A. Johnson, Po. 8192, Second Tribune)

MISSISSIPPI

*BRANDLI, H. E., 15617, First Tribune, care Meridian Light & Power Co.....Meridian
(*Chas. M. Rogers, Po. 14485, Second Tribune)
GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co.....Gulfport
*MCANGE, W. N., Po. 16854, First Tribune, care Southern Telephone & Telegraph Co., Telephone Building.....Corinth
NEWBILL, HOMER J., Po. 16855, First Tribune, Box 413.....Tupelo

MISSOURI

*BARBER, A. D., Po. 1850, First Tribune, care Western Electric Co..Kansas City
*BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co.....Marshall
(G. E. Michel, Po. 9061, Second Tribune).....St. Louis
FOX, CHAS. D., Po. 18163V, First Tribune, care City Light Plant.....St. Joseph
(S. W. Beale, Po. 6840, Second Tribune)
(A. M. Grall, Po. 4112, Second Tribune).....Joplin
*NIENHAUS, J. V., Po. 19219, First Tribune, care Perry County Public Utilities Co.....Perryville
*WALKER, A. H., Po. 17669, First Tribune, care Walker-O'Byrne Electric Co.....Springfield

NEBRASKA

BURLEY, W. B., Po. 10291, First Tribune, 318½ West Koenig St...Grand Island
(J. D. Whitmore, Po. 1409, Second Tribune)

NEW JERSEY

ALEXANDER, JOHN P., Po. 11892, First Tribune, Broad St. Bank Bldg...Trenton
COX, W. A., Po. 18960, First Tribune, care Public Service Electric Co...Newark
FEY, W. E., Po. 10120, First Tribune, care Diehl Manufacturing Co...Elizabeth
*PURINTON, A. J., Po. 9643V, First Tribune, care Atlantic City & Shore Ry. Co.....Atlantic City
(*Wm. Bach, Po. 14191, Second Tribune)
STORTZ, H. W., Po. 16450, First Tribune, care Edison Storage Battery Co. Orange
(J. B. Renwick, Po. 16445, Second Tribune)

NEW MEXICO

*HICKS, A. C., Po. 17978, First Tribune, care Albuquerque Gas & Electric Co.....Albuquerque
*ROBERTS, E. A., Po. 17980, First Tribune, care Public Utilities Co.....Carlsbad
SMITH, JAMES R., Po. 16107, First Tribune, care Raton Electric Light & Power Co.....Raton

NEW YORK

(C. C. MacKenzie, Po. 2029, Second Tribune).....Syracuse
BURNS, JOHN H., Po. 870, First Tribune, care McCarthy Bros. & Ford, 41 Eagle St.....Buffalo
(L. F. Philo, Po. 774, Second Tribune)
*PELZ, GEO. V. W., Po. 18674, First Tribune, care New York Telephone Co., 109 West 125th St.....New York
(*W. J. Moore, Po. 3136, Second Tribune)
*RUSSELL, R. E., Po. 5561, First Tribune, care General Electric Co..Schenectady

NORTH CAROLINA

JONES, WM. T., Po. 5685, First Tribune, P. O. Box 405.....Fayetteville
SPEAKE, CHAS. L., Po. 16993, First Tribune, care Westinghouse Electric & Manufacturing Co.....Charlotte
*SPENCER, G. L., Po. 11366, First Tribune, 713 Chestnut St.....Greensboro
(*R. H. Milton, Po. 11371, Second Tribune)

OHIO

*ALLIS, CLARENCE L., Po. 13203, First Tribune, care Wooster Electric Co. Wooster
BRAUN, W. A., Po. 14652, First Tribune, care Braun Electric Manufacturing Co.....Dover
*BULKELEY, W. V. C., Po. 17998, First Tribune, care Columbus Railway, Power & Light Co.....Columbus
*COCHRAN, J. E., Po. 15898, First Tribune, care Ohio Electric Co.....Lima
*COONEY, JAS. J., Po. 13184, First Tribune, care Toledo Railway & Light Co.....Toledo
(*Alonzo W. Roush, Po. 12410, Second Tribune)
CRAIN, CHARLES E., Po. 6946, First Tribune, care Crain-Stuart Co. . Springfield
(Fred J. Green, Po. 6951, Second Tribune)
*DUNNING, R. S., Po. 16471, First Tribune, care Forest City Rubber Co. Cleveland
*FENTON, E. BURT, Po. 18446, First Tribune, care Northern Ohio Traction & Light Co.....Akron
(*A. P. Regal, Po. 19064, Second Tribune)
*FOX, HORACE C., Po. 16361, First Tribune, care Massillon Gas & Electric Co.....Massillon
HENCH, L. W., Po. 7854, First Tribune, care Westinghouse Electric & Manufacturing Co.....Youngstown
(E. A. Sanders, Po. 9666, Second Tribune)
HURD, WILLIAM P., Po. 9798, First Tribune, care Northwestern Ohio Light Co.....Van Wert
(*Samuel E. Ringgold, Po. 10995, Second Tribune)
LOEWE, P. M., Po. 3942, First Tribune, care Oberlin Gas & Electric Co..Oberlin
MILLER, E. G., Po. 13108, First Tribune, care Warren & Niles Telephone Co.....Warren
(Marshall, W. J., Po. 10001, Second Tribune)
PARKER, HERBERT L., Po. 905, First Tribune, care Conneaut Metal Works Co.....Conneaut
*ROHRBAUGH, C. L., Po. 18450, First Tribune, 1211 Carr St.....Sandusky
(*R. C. Beebe, Po. 18442, Second Tribune)
*SELLS, J. F., Po. 8979, First Tribune, care Mansfield Electric Light & Power Co.....Mansfield
SIMS, E. A., Po. 5968V, First Tribune, care Avery-Loeb Electric Co.....Newark
(F. C. Morrison, Po. 18630, Second Tribune)
SMITH, E. B., Po. 10596, First Tribune, care Coshocton Gas Co.....Coshocton
VAN WINKLE, FRANK D., Po. 12966, First Tribune, care Post Glover Co.....Cincinnati
(*L. E. Trotter, Po. 3510, Second Tribune)

OKLAHOMA

*CORKEN, O. K., Po. 19827, First Tribune, 213 W. First St.....Oklahoma City
HOWELL, EDWARD, Po. 7896, First Tribune, care Abernathy & Howell, Elks Building.....Shawnee
*RENTCHLER, C. E., Po. 6870, First Tribune, care Enid Electric & Gas Co....Enid
(*Lincoln Beerbower, Po. 1475, Second Tribune)
*STRASSWEG, FRED A., Po. 19821, First Tribune, care Muskogee Gas & Electric Co.....Muskogee
(*Edgar M. Graham, Po. 19811, Second Tribune)
*WALKER, P. G., Po. 6871, First Tribune, care Tulsa Corporation.....Tulsa
(James M. Kinslow, Po. 16770, Second Tribune)

PENNSYLVANIA

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(*D. Paul Lockard, Po. 5788, Second Tribune)
FERREE, L. L., Po. 18865, First Tribune, 1830 Regina St.....Harrisburg
KRISE, W. M., Po. 4823, First Tribune, Manager, Jefferson Electric Co.....Punxsutawney
LODGE, JOS., Po. 18869, First Tribune, 157 East Chestnut St.....Lancaster
MURPHY, WALTER R., Po. 14021, First Tribune, care Meadville Telephone Co.....Meadville
(Carl W. Wilks, Po. 10848, Second Tribune)
(W. T. Snyder, Po. 5128, Second Tribune).....McKeesport
REGER, THOMAS E., Po. 4637, First Tribune, 224 Seventh Ave.....Altoona
*ROUNDS, L. B., Po. 14528, First Tribune, care New Castle Electric Co., 19 Washington St.....New Castle
(*J. C. Chestnut, Po. 14873, Second Tribune)

SOUTH CAROLINA

DOUGLAS, JAS. A., Po. 16984, First Tribune, care Municipal Electric Plant.....Lake City
(T. A. Brookbanks, Po. 16460, Second Tribune).....Charleston

TENNESSEE

ALLEN, TERRY E., Po. 18838, First Tribune, P. O. Box 185.....Jackson
*JONES, GRAYSON, Po. 13782, First Tribune, care Electric Equipment Co., 131 Eighth Ave., North.....Nashville
RUTLEDGE, C. B., Po. 2127, First Tribune, care Bluff City Electric Co..Memphis
(B. F. Myers, Po. 12911, Second Tribune)

TEXAS

*IRVINE, R. J., Po. 6251, First Tribune, care San Angelo Water, Light & Power Co.....San Angelo
*COOPER, H. S., Po. 365, First Tribune, care Southwest Gas & Electric Co., 405 Slaughter Building.....Dallas
COPLEY, E. F., Po. 7073, First Tribune, care Central Electric Co.....Waco
(L. B. Gardner, Po. 11390, Second Tribune)
*FROST, F. G., Po. 4015V, First Tribune, care Houston Lt. & Pr. Co.....Houston
*KELSEY, L. M., Po. 11350, First Tribune, care S. W. Tel. & Tel. Co...Galveston
(*Wooten, J. H., Po. 20357, Second Tribune)
LARABEE, R. W., Po. 1327, First Tribune, care Southwestern Electric & Machine Co.....El Paso
*MILLER, THOS. L., Po. 8766, First Tribune, 219 Poplar St.....Abilene
MONTGOMERY, JOHN G., Po. 11355, First Tribune.....La Marque
MUNROE, WALTER N., Po. 3085, First Tribune, care Texas Power & Light Co.....Paris
REID, BRUCE, Po. 18290, First Tribune, care Gulf Refining Co.....Port Arthur
(Edward T. Keck, Po. 18284, Second Tribune)
*SCOVILL, F. E., Po. 17, First Tribune, care San Antonio Builders Exch. San Antonio
(*C. G. Matthews, Po. 10662, Second Tribune)
SMITH, GEO. B., Po. 6649, First Tribune, 309 Guadalupe St.....San Marcos — Central Texas League: Lockhart, Luling, Seguin, New Braunfels, San Marcos

VIRGINIA

*LANCASTER, WM., Po. 6594, First Tribune, care Western Electric Co..Richmond
(*Peter Winston, Po. 1546, Second Tribune)
*MACLEARY, H. M., Po. 9725, First Tribune, 707 Washington St.....Suffolk
(*J. E. B. Holliday, Po. 17106, Second Tribune)

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(*G. C. Hurst, Po. 8931, Second Tribune)
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WASHINGTON

(H. B. Pierce, Po. 7235, Second Tribune).....Spokane

WEST VIRGINIA

COSTINE, THOS. E., Po. 7699, First Tribune, 1059 McColloch St.....Wheeling
(R. R. Fagin, Po. 9161, Second Tribune)
*WALKER, C. D., Po. 18092, First Tribune, care C. & W. Electric Co. Huntington

WISCONSIN

*BRIGGS, WILFRED, Po. 12382, First Tribune, 18 Portland St.....Fond du Lac
(*John Adams, Po. 12378, Second Tribune)
DEARTH, E. C., Po. 17144V, First Tribune, care Wisconsin & Minnesota Light & Power Co.....Eau Claire
(Holmes Ives, Po. 18253, Second Tribune)
*DUNHAM, A. W., Po. 7352, First Tribune, care Sun Ray Manufacturing Co.....Oskhosh
*DOUGLAS, I. R., Po. 18360, First Tribune, care of the Michigan Appliance Co.....Milwaukee
(*A. L. Engle, Po. 18991, Second Tribune)
*ENGSBERG, B. C., Po. 15985, First Tribune, care Light and Water Department.....Lake Mills
LINKER, P. R., Po. 14302, First Tribune, care Wisconsin-Minnesota Light & Power Co.....La Crosse
(Dan Whalen, Po. 16022, Second Tribune)
TESSIER, LEONARD L., Po. 18823, care De Pere Electric Light & Power Co. De Pere
WICKLER, W. O., Po. 20000, First Tribune, care Wisconsin Gas & Electric Co.....Watertown

CANADA

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(David Conn, Po. 11885, Second Tribune).....Lethbridge

MANITOBA

*HENRY, J. S., Po. 5994, First Tribune, 152 Gary St.....Winnipeg
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ONTARIO

*BRADLEY, J. M., Po. 13203, First Tribune.....Iroquois Falls
(C. B. Deeks, Po. 17101, Second Tribune).....Coniston
COOKE, W. P., Po. 16714, First Tribune, P. O. Box 178.....Port Arthur

SASKATCHEWAN

SANGSTER, A. G., Po. 7496, First Tribune, 820 Fourteenth St., East...Saskatoon

SPAIN

EDDY, H. W., 11105, First Tribune, care Riegos y Fuerza del Ebro S. A. Apartado 491.....Barcelona

* * * *

JOVIAN HOTELS

HOTELS in this directory allow Jovians a discount of 10 per cent from the amount of lodging bills on presentation of their **current membership cards** at the time of settlement. **Resident and traveling Jovians are expected and urged to give Jovian Hotels their whole patronage.** Address inquiries and complaints on the subject of Jovian Hotels to ELL C. BENNETT, Po. 3932-13V, General Manager, Commercial Division, Syndicate Trust Building, St. Louis Mo.

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Columbia, S. C.—COLONIAL	.....	.....
Dallas, Tex.—ORIENTAL	$1.50	.....
Denver, Colo.—ALBANY	$1.00	$1.50
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Eau Claire, Wis.—EAU CLAIRE	.....	.....
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Winnipeg, Man.—ST. REGIS	$1.50	.....
Winona, Minn.—WINONA	.....	.....

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Kansas City, Mo.	"	No. 2
Pittsburgh	"	No. 3
Minneapolis	"	No. 4
St. Joseph, Mo.	"	No. 5
Louisville, Ky	"	No. 6
Stark County Jovian League Comprising the towns of Massillon, Canton and Alliance, Ohio.	"	No. 7
Tulsa, Okla	"	No. 8
Eau Claire, Wis.	"	No. 9
Harrisburg Pa.	"	No. 10
Wichita, Kan.	"	No. 11
Winnipeg, Man.	"	No. 12
Bay City, Mich.	"	No. 13
Milwaukee, Wis.	"	No. 14
Port Arthur, and Fort William, Ont.	"	No. 15
Oklahoma City	"	No. 16
Galveston, Texas	"	No. 17
Muskogee, Okla.	"	No. 18
Mansfield, Ohio Comprising Richland and Ashland Counties.	"	No. 19
St. Louis	"	No. 20
Southwestern Michigan Jovian League Benton Harbor, Michigan.	"	No. 21
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JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, V. W. Shear, Po. 14399, 323 Ohio Building.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, R. J. Hadlow, Po. 15530, care Electric Service Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, Edmond D. McCarthy, Po. 589-10, 41 East Eagle Street.

CHATTANOOGA—Wednesday, 12:00 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge, 1900 Continental & Commercial Bank Building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, Joseph C. Bowman, Po. 6275, care H. W. Johns-Manville Company.

CLEVELAND—Regular meeting, Thursday, 12:00 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, Lucille J. Darrah. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12:00 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Railway, Power & Light Company.

DALLAS—First and third Mondays, Hotel Adolphus, 12:15 p. m. Secretary, H. S. Cooper, Po. 365, Slaughter Building.

DAYTON—First and third Mondays of each month, 12:00 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Company.

DENVER—Second and fourth Wednesdays, 12:15 p. m., Kenmark Hotel. Secretary, T. B. Burnite, Po. 3426V, 523 Boston Building.

DETROIT—Meetings Saturday, 12:30 p. m., Grill Room, Board of Trade. Secretary, R. J. Kirchner, Po. 5199, care General Electric Company.

EAU CLAIRE—First Monday each month. Secretary, E. C. Dearth, Po. 17144V, care Wisconsin & Minnesota Light & Power Company.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna Street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur Hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Company.

GALVESTON—Luncheon meeting fourth Tuesday each month. Secretary, F. G. Cassara, Po. 20343, care Southwestern Telephone and Telegraph Company.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Company.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Company.

HOUSTON (TEX.)—Date later. Rice Hotel. Secretary, R. S. Daunoy, Po. 20073, care Houston Lighting & Power Co.

INDIANAPOLIS—Monday, 12:15 p. m. Secretary, A. H. Smith, Po. 13580, care Ford Motor Car Company, 1315 East Washington Street.

KANSAS CITY—Third Friday each month, 12:15 p. m., Hotel Muehlebach. Secretary, T. R. Harber, Po. 18908, 1500 Grand Avenue.

LA CROSSE—First Thursday each month, Elks Club, 6:00 p. m. Secretary, Dan J. Whalen, Po. 16022, care Thill-Manning-Whalen Company.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Company.

LOS ANGELES—Wednesday, 12:00 m., Jahnke's Tavern, 534 South Spring Street. Secretary, Clifton Peters, Po. 12734, 108 Edison Building.

LOUISVILLE—Tuesday, 12:15 p. m., Hotel Henry Watterson. S. B. Storm, Po. 9781, care General Electric Company.

MANSFIELD—Date and place of meeting from Secretary, H. A. Waite, Po. 16625, care Federal Sign System.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel. Secretary, W. R. Murphy, Po. 14021, care Meadville Telephone Company.

MILWAUKEE—Second Tuesday each month, Hotel Plankington. Secretary, F. V. Ziekursch, Po. 16625, 436 Public Service Building.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second Avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

MUSKOGEE—Secretary, F. H. Neber, Po. 19815, care Peabody Electric Company.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Company.

NEW ORLEANS—Second and fourth Tuesdays of each month. 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne Street, New Orleans, La.

NEW YORK—Place and date of meeting from Secretary, F. M. Feiker, Po. 17197, care Electrical World, Tenth Avenue and Thirty-sixth Street.

OKLAHOMA CITY—Monday, 12:15 p. m., Lee Huckins Hotel. Secretary, A. L. Mullergren, Po. 18853, care Berham Engineering Company.

PEORIA—First and third Saturdays of each month, 1:00 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Company.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon Street.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, R. Gray Jones, Po. 16094, care Cutter-Hammer Company.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's Restaurant, Kellog Street. Secretary, J. O. Roser, Po. 10412, care General Electric Company.

RICHMOND—Third Wednesday of each month, Business Men's Club. Secretary, L. E. Walker, Po. 6610, care Western Electric Company.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Company.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto Avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Company.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Redpath, Po. 7739, 505 Rialto Building.

SPOKANE—First and third Wednesdays of each month, 12:00 m., Davenport's Hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Company.

STARK COUNTY—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

ST. LOUIS—Tuesday, 12:15 p. m., American Annex Hotel. Secretary, Geo. McD. Johns, Po. 9052, Room 401, City Hall.

ST. JOSEPH, MO.—Secretary, .W R. Thomas, Po. 1489, care American Electric Company.

TULSA, OKLA.—Monday, 12:00 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G. Walker, Po. 6871, 18 West Third Street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Company.

WATERTOWN (WIS.)—7:00 p. m., last Thursday each month, New Commercial Hotel. Secretary, H. J. Hippler, Po. 20007, care Wisconsin Gas & Electric Company.

WICHITA—First and third Mondays of each month, 12:00 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Company.

WINNIPEG—Every other Thursday, 12:15 p. m., Fort Garry Hotel. Secretary, C. T. Kummen, Po. 15957, 386 Donald Street.

* * * *

WASHING EGGS BAD PRACTICE

GROCERS receiving eggs they expect to keep on hand any length of time should not wash them, even if they are dirty. The dirt is wholly on the outside, and only affects the appearance of the egg. The shell of an egg contains a gelatinous substance which prevents air and germs from entering the eggs. Washing destroys this substance.

Many customers will not buy soiled eggs, but it is desirable that the grocer should explain these facts to his patrons. The public has been trained to demand and buy clean eggs. It should be remembered that dirty eggs, while not pleasing to the eye, are often the better. According to the Department of Agriculture, more than five million eggs spoil unnecessarily in cold storage every year because they have been washed or have in some way become wet before being sent to market.

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KEYLESS
PULL

INTER-
CHANGE-
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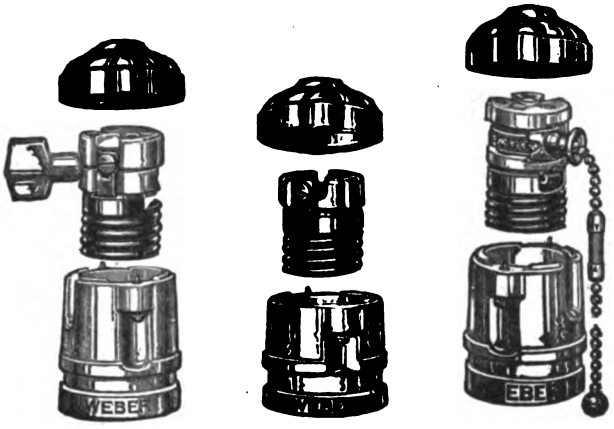

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WHAT WE FIGHT FOR

THE high aims of America and her allies are well expressed in President Wilson's greetings to France on Bastile Day:

"As France celebrated our Fourth of July, so do we celebrate her Fourteenth, keenly conscious of a comradeship of arms and of purpose of which we are deeply proud. The sea seems very narrow today, France is so close neighbor to our hearts. The war is being fought to save ourselves from intolerable things, but it is also being fought to save mankind. We extend our hands to each other, to the great peoples with whom we are associated; and to the peoples everywhere who love right and prize justice as a thing beyond price, and consecrate ourselves once more to the noble enterprise of peace and justice, realizing the great conceptions that have lifted France and America high among the free peoples of the world. The French flag flies today from the staff of the White House, and America is happy to do honor to that flag."

* * * *

KANSAS BOTTLER GIVES UP SUGAR

R. SCHOTT, manager of the Osage Bottling Works, of Osage City, Kan., would rather see the home canners get sugar than to operate his plant, according to a letter received from him by the Food Administration. Schott wrote this letter in reply to an order of the Federal Food Administration in Kansas to hold 1,200 pounds of sugar in his factory subject to orders. The order practically closes down the plant several weeks as far as the making of soft drinks is concerned.

"Your letter of the 4th received," wrote the manager of the bottling works. "I sure will hold the 1,200 pounds subject to your order, and if necessary will give up all the sugar I have in order to win this war. I would rather see sugar go into canning than into drinks or candy. Win the war is what I say."

"The patriotism of the management of the Osage Bottling Works should be an incentive to every person to save sugar," said an official of the Food Administration at Wichita in commenting on the letter.

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THE JOVIAN

olume Twelve | OCTOBER, 1918 | Number Eleven

The Official Facts

By HARVEY O'HIGGINS
Associate Chairman, Committee on Public Information

WAR FOOD PRICES.

FIGURES compiled by the Food Administration show that the farmer, going to market this summer to sell his produce, got $1.27 for every dollar that he received last summer; and the housewife, going to market to buy her supplies, paid 87 cents for every dollar that she paid last summer.

The difference has been saved out of the profits of the middle man.

For instance, the price of flour in the spring of 1917 was $16.75 a barrel wholesale in Minneapolis. This spring it was $9.80 a barrel. The difference between the selling price of a farmer's wheat and the selling price of the flour that was made from that wheat was $5.68 in May, 1917. In May, 1918, it was only 64 cents.

These reductions have been made despite the fact that we have taken out of our markets enough food to save our allies in Europe from famine. We have shipped 120 million bushels of wheat instead of the 20 million bushels that we thought would be our limit. We have exported 87 million pounds of beef a month instead of only 2 million pounds. And instead of only 50 million pounds of pork a month, we have shipped as much as 308 million pounds.

In a campaign to prevent profiteering and food wastage, the Food Administration in ten months imposed some 815 penalties on wholesale and retail dealers, commission men, millers, canners, bakers, cold storage companies, brokers, grocers, restaurant men, and so forth. About 150 companies and individuals have been ordered to abstain from business in licensed commodities either permanently or for stated periods. The others have been regulated by fines or minor penalties. In many more cases, the desired result has been obtained by means of warnings. And besides this work of the Washington headquarters, the Federal Food Administrators in their respective States have disposed of a vast number of cases on their own authority.

There is still profiteering going on, and against it the Government is making a broad campaign, but shortage of shipping has become one of the great causes of the high cost of living, and that difficulty can only be overcome by building ships.

The price of bananas has increased because half the banana boats have been taken as army transports. There is a huge crop of sugar in Cuba, Porto Rico and Hawaii, but there are not ships enough to move it. Ocean freight rates on rice and tea and tapioca from China, India and the Straits Settlements have become very high. On tea, for instance, the rate has risen from one cent to five cents a pound.

We used to import great quantities of hides from China, and we bring a tanning extract, called quelbracho, from South America. Ocean freight rates on hides have increased 500 per cent, and on quelbracho 600 per cent. Our farmers use nitrate of soda from Chili for fertilizer. The rate on it has increased from $5 to $30 a ton. Equal increases have helped to raise the price of jute and hemp, rubber, tin and wool.

These are part of the inevitable hardships of war. The gradual defeat of the submarine campaign and the gradual suppression of profiteering are working together to reduce food prices. Both take time. But in both success seems assured.

War Inventions

When this war began, Germany practically controlled the world's supply of potash. We have not only developed new potash fields in America, we have found a way to take potash from the flue dust of cement works, and we are now independent of the German potash supply for all time.

For years before the war, Germany was buying up the world's supply of castor oil and storing it for use in lubricating airplane engines. We have now perfected a mineral oil that serves as well as castor oil in all but the very fast fighting planes.

We have discovered a way to make coal smokeless by extracting from it valuable by-products that have previously gone to waste.

We have similarly found a way to save half the oils, greases and animal fats that have been lost in use in the past.

We have recently produced a gas mask that can be worn for hours without discomfort, even in a rapid advance.

We have introduced improvements in rifles and machine guns that give our soldiers weapons greatly superior to the enemy's.

New methods and appliances for fighting submarines have overcome the U-boat menace. New industrial methods in shipbuilding have speeded up our production beyond all expectation. Improvements in wireless communication have given our troops a great advantage on the battlefield. Improvements in medical science have reduced our army's death rate from disease to one-tenth of the lowest rate established heretofore.

In short, the nations whose inventive genius supplied the Germans with all their modern engines of war have now so improved on those inventions that the Germans are fighting at an increasing disadvantage on land, on water, and in the air. And civilization is proving its ability to defend itself from barbarism, even when the barbarian is armed with weapons which he has borrowed from less backward people.

Our Fuel Problem

The war program of the Nation demands eighty million more tons of coal this year than last.

We are calling for eight million tons of steel ships, and to manufacture and deliver the steel for them will take fourteen million tons of coal. Three million tons are needed to carry our average monthly delivery of troops to Europe, and four million tons to transport their supplies. One hour of intensive artillery action at the front uses up 1,800 tons of steel, which it takes 7,200 tons of coal to produce. To manufacture and transport the sixty million shells that were fired by the French in the battle of Verdun, called for the consumption of nearly nine million tons of coal.

(continued on page nine)

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor
W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

All matter for the news columns of The Jovian, and advertising copy, should reach the Central Offices not later than the first of each month.

Advertising rates on application

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In Charge of Central Offices.

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Past Jupiter Fourteen, Indianapolis, Ind.
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Past Jupiter Fifteen, New York City.

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THE VALUE OF JOINT MEETINGS WITH OTHER ORGANIZATIONS

LAST year, owing to war activities, and the call for enlistment, the St. Louis Jovian League found on several occasions that its attendance was below normal. This condition manifested itself at times when speakers who were not so prominent were secured to make addresses, and on one or two occasions the attendance fell off to something under half the normal number.

There are in St. Louis several other organizations that hold weekly luncheon meetings. Two of them in particular, the Rotary Club and the St. Louis Advertising Club, were experiencing the same difficulty in getting attendance at their meetings. On one occasion the Advertising Club had a splendid speaker booked to make an address. He was a man who had been talking to crowded houses, and when the Speakers' Committee of that organization got him to consent to make an address, which they did three or four weeks in advance, they had felt certain that their members would turn out and pack the dining room to its capacity. However, the attendance at the two previous meetings had been very small; so small, in fact, that a vision of a half empty room presented itself to their imagination in the form of an impending catastrophe.

Taking counsel, they decided to extend an invitation to the Jovian League members and to the Rotarians for the occasion. Both organizations accepted, the house was packed, and a splendid address was enjoyed by the members of the three organizations that might otherwise have been delivered to a few members of one in a half-filled room.

That was the forerunner of a number of other joint meetings of those three organizations during the past season, and the arrangement proved so successful and so satisfactory that in planning their programs for this year the members of the entertainment committees of the Orders got together and effected an arrangement whereby one joint meeting will be held each month.

As the arrangement stands, the Jovian League will provide the speaker one month, the Rotary Club the next and the Advertising Club the next.

The advantage of such an arrangement is obvious. In the first place, it greatly increases the attendance, a thing that speakers of prominence always look to when consenting to make an address. No man wants to address a few people, and men who are in demand as public speakers, the kind of men that have real messages, usually will not consent to do so. In fact, nearly the first question asked of the representative of an organization when trying to secure a man of prominence to make an address is: "What is your attendance?"

If he says thirty or forty, he is not apt to get a favorable reply. If, on the other hand, he can say two or three hundred, he will find a great deal of difference in the way the speaker considers his request.

Again, by the combination of two or three organizations, especially in cities where there are a large number of organizations, and probably one or two that overshadow the others by their larger membership, co-operation of this kind will enable the smaller organizations to compete for the most prominent speakers to be had, and even places them in a position to obtain the first call on the services of speakers of National prominence.

From a co-operative standpoint, the idea is both logical and practical. By bringing two or more organizations together that are interested in the civic affairs of a community, the same harmonizing influence is exerted as that of bringing together the members of an industry. There are plenty of issues on which they stand in common, and association tends greatly to iron out any feeling of jealousy that exists between the two bodies.

Another thing that was discovered by holding joint meetings as described above was the fact that in nearly every instance

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the combined attendance more than equaled the attendance of the three organizations at their separate meetings under ordinary conditions. The prominence of the speaker, of course, served as an attraction, but the mere fact that the three organizations were to hold a joint meeting apparently tended of itself to promote interest.

Several co-operative movements directed towards war and civic activities may also be attributed to these joint meetings, and it is evident that the three St. Louis organizations will not only work in greater harmony, but will be able to accomplish much more in civic and war work than previously.

There is probably no city in which there exists a Jovian League where this idea can not be put into effect, and if properly handled, the arrangement will be found of great benefit.

* * * *

INTANGIBLE VALUE OF CO-OPERATION

A GREAT deal of that spirit which tends to elevate human beings is contained in the relationship of brotherhood. The congenial association of men generates feelings of sympathy, affection and appreciation through understanding. From a distance we are inclined to view the actions of others without taking into consideration the inclinations and impulses that inspire their efforts. Neither do we give full consideration to their problems, the difficulties that confront them to impede their progress and the consummation of the achievements they attempt.

Rather our standards of judgment are influenced by the mechanical calculations of some self-accepted psychology as a criterion, which allows our imagination to lead us into a state of suspicion. We are prone to attribute an ulterior motive where none exists, merely because we overlook the details that often exert their influence in all human affairs.

By association we become familiar with the aspirations of our fellow-man. We learn of his problems, his trials, the things that make for his success or his failure. We discover they are similar to our own. The more thoroughly we analyze them the more clearly they reflect our own aspirations and the obstacles we encountered in attempting their attainment. Gradually the bond of sympathy, appreciation, fellowship, asserts itself as the human interest develops. We discover a kindred being whom we have heretofore considered merely in the light of an automaton. We find he has a heart, a soul; that he is susceptible to the influences of honor and charity; that he may be swayed by sympathy, appreciation, affection—even love—that our previous suspicion that his efforts were subtle machinations directed towards the injury of others was entirely without foundation.

In the revelation of human elements brought about by association, the feeling of resentment, so often based on unjust suspicion, vanishes. Deductions formed from a distance that often lead into an error of harsh judgment give place to the instinctive sense of kinship, and instead of the enemy we had pictured, we find—a friend.

It is to this particular feature of life that the Jovian Order is devoting some of its efforts. The fundamental principle upon which the organization is based is that of harmonizing, by association, the antagonistic features of business that generate ill-feeling. This has frequently been termed "goodfellowship," and we believe under that name a full interpretation of the activity of the Order has not been grasped, or has been misconstrued to signify, at least to a certain extent, a hilarious interpretation of the term.

In the early life of the organization, there can be no doubt that some stigma was cast upon the seriousness of its purpose by this misconstrued interpretation on the part of those who were misinformed. Although we do not doubt that even under a free-and-easy method of harmonizing, something might be accomplished in bringing together the members of the industry, it does not in any sense represent the principle for which the organization stands in its work of promoting co-operation.

Quite to the contrary, it seeks to advance the cause it represents through the logical rule that applies to human affairs—that of bringing men together to discuss their problems, their differences, their aspirations, as it has been proven conclusively that to a large degree the ill-feeling that exists between the members of an industry is attributable directly to a misunderstanding or a misconstruction of purpose.

Business, as we all know, to be successful must be prosecuted vigorously, and vigorousness generates friction. There is bound to be conflict between business elements, and business elements being human elements are susceptible to human emotions of anger, jealousy, and envy. If allowed to run without any lubricant, they become more irritated, and ultimately as a rule result in the adoption of retaliatory practices, which are injurious, and sometimes ruinous.

In fact, it is a matter of record that business wars starting from such misconstruction of purpose have wrecked many a business concern, even entire industries. There have also been instances recorded where post-mortem investigations of the causes of such business catastrophes have revealed that the questions that perpetrated them were of a trivial nature that could easily have been adjusted if the proper harmonizing influence had been brought to bear before hostilities were declared, and the intervention of such influences would have been instrumental in saving hundreds of thousands of dollars, and huge industries from a suspension of operations.

Of course, had the influence been brought to bear and these ruinous commercial wars averted, exactly what had been accomplished would never have been known, nor would it have ever been fully appreciated. That is a condition that the Jovian Order has to contend with. Whether it be a large or small enterprise, or some particular branch of industry that is saved from some costly antagonistic practice through its influence, the exact value of the accomplishment in dollars and cents may never be known, nor will it ever receive due credit for being instrumental in preventing such losses.

However, the need for such a service should be so apparent that every business man could appreciate it without being able to figure the value of the service it renders in dollars and cents. The need for the harmonizing influence it exerts should appeal logically to every man in the industry, from the smallest retailer to its most autocratic member. It is a human influence, but it is just as truly a dollars-and-cents influence. One that makes for progress by preventing deteriorating practices, ill-feeling, cut-throat competition from spite motives and other ills that have been characteristic of the industry in its pioneer stages.

A full comprehension of its value from this standpoint alone should make the Jovian Order one of the most powerful business organizations in the world.

* * * *

ENTERTAINMENT AT THE CONVENTION

WHEN plans for the Convention were being discussed, the idea of holding a strictly business meeting was given consideration, and members of the Jovian Congress were unanimous in the opinion that little, if any, entertainment should be included in the program.

In this matter, however, there was just one element they did not reckon with; that was the hospitality of the State of Texas. The idea of holding a convention without entertainment features has probably been remotely conceived in the minds of Texans, but not a convention held within the bounds of the Lone Star State.

When Dallas was selected as the place for the convention, the local league and other organizations of the city immediately began to devise a program that would be a credit to the traditions of hospitality of the State. Realizing the prevailing conditions, however, they also sought to modify their enter-

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tainment program, but—according to the Texas conception of modification. Consequently, they outlined a program that in their estimation would fully accord with the serious purposes of the convention.

Since it was first outlined the program has been still further modified, until it will now accord with the convention ideas of the most serious-minded members of the Order.

This is the greatest sacrifice that could possibly be asked of a Texas city—that of curtailing any feature contributing to its hospitality—but the organizations of Dallas have arisen to the occasion, and are all working to make the meeting a record one for constructive achievement.

* * * *

NO COVENANTED PEACE WITH GERMANY

America, unless we repudiate civilization and abandon humanity and put a premium on savagery and brutality, can make no covenanted peace, no peace by agreement or negotiation with Germany. It would be a covenant with hell, a partnership with infamy.

Nor would such a peace secure peace, except so long as it suited Germany. We can judge the future only by the past, and to Germany sacred treaties are scraps of paper only. Germany's whole history is a record of national treachery, national bad faith, national dishonor, national murder, and national infamy.

Article 56 of the Hague Convention, to which Germany solemnly subscribed, is: "Family honor and rights, the lives of persons and private property, as well as religious convictions and practice, must be respected. Private property can not be confiscated."

The world knows how Germany has observed this article. There are millions of individual witnesses to her flagrant breaches of it. Every acre of foreign soil Germany has occupied bears mute, but unimpeachable evidence of it. There is plenty of German evidence of it, too:

"The goods of different sorts seized in the enemies' territories are in such large quantities that the difficulty of knowing where to put them increases day by day. At the request of the Prussian minister of war, all chambers of commerce have been asked to give all possible information with regard to storehouses, sheds, etc., which could be used temporarily to warehouse the spoil." (From the Frankfurter Zeitung, January, 1918.)

The German papers have been crowded with advertisements of sale of property taken from France and Belgium. Members of the Reichstag have boasted of, others have censured, the amount of booty brought to Germany from the occupied territory, and the destruction has been far greater than the confiscation.

Of the old men and children murdered, of the women and girls ravished, of the noncombatants taken from their homes and deported to work for their conquerors, of the merchant ships sunk and passengers and crews murdered, of the hospital ships sunk, the hospitals and unfortified cities bombed, of the mutilation and murder by crucifixion and otherwise of wounded and captured soldiers—of all this beastliness there is plenty of evidence, evidence that no one can disbelieve.

The best answer to German peace propaganda is sinking more U-boats, sending more men to France, speeding up our work along every line, and a heavy subscription to the Fourth Liberty Loan. Peace must mean the triumph of right and justice, the defeat of Germanism, not a truce with it, not a compromise with it.

Our soldiers in France are gloriously doing their part toward victory; the Liberty Loan subscription must show them that the people at home are doing theirs.

* * * *

THE "LITTLES" OF THE FRENCH

Even in Rheims People Are Still Lending To Their Government

"IN Rheims last winter," says Dana Burnet, in the Saturday Evening Post, "as I was walking through a street that Teutonic Kultur had reduced to a mere jagged scar, I saw posted to the wall of a gutted house a poster advertising the current French War Loan.

"'What!' I exclaimed to the officer who accompanied me. 'Do you expect to get money out of Rheims?'

"'Why not?' he said. 'There are some four thousand people here.'

"Four thousand people out of an ante-bellum population of say 120,000, still lived in that tragic and crucified town. Four thousand civilians—old men, women and children—still clung to the broken stones that once had housed their peaceful lives, still went clacking in their wooden shoes about those ruined streets; still maintained the shreds of a disrupted commerce with the soldiers who were their only customers. Being French people, they had money to invest! Not even the thunders of continuous bombardment, not even the crumbling of the roofs over their heads could shake them out of the habit of thrift. War had only intensified that material virtue as the destruction of their beloved cathedral had intensified their spiritual faith.

"They lived, they saved; they subscribed to the loan."

And he tells of one woman who had stayed in Rheims during its hundred bombardments and had subscribed to every war loan. She said:

"Not much, monsieur, but yet a little. We French have learned to do with our littles."

In calling attention of the members to the importance of attending the Dallas Convention, we wish to point out to those who fully appreciate the value of co-operation that the work to be accomplished in this connection is the approval of a plan in which the entire electrical industry can unite to render a big service to our Government. It may require a sacrifice on the part of a number of members to be present in these times of strenuous activity, but nearly all big undertakings require a sacrifice of some kind. Those who make the sacrifice are the ones who perform the service.

Be among those present at Dallas to assist—**October 24-26.**

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The Official Facts

(*Continued from page 5*)

The demands for coal this year have increased in American industrial plants eighteen per cent, in gas and electric utilities fifteen per cent, in shipping thirty per cent, in the railroads seven per cent, and in domestic consumption thirteen per cent.

It has been impossible to provide for these increases by increased production. There have been 224 new mines opened and weekly production has risen as high as a seventeen per cent increase over the corresponding week of 1917, but there has not been the necessary mine labor available to meet the whole demand, and there have not been coal cars enough to keep the coal moving from the mines.

In an attempt to meet the deficit, the Fuel Administration has carried out a thorough campaign of saving. It has undertaken to inspect the country's 250,000 steam-producing plants, and hopes to save thereby twenty million tons of coal a year. As a result of this inspection, in Connecticut alone eighty plants are saving 50,000 tons annually. One plant in Syracuse is making a saving that will amount to 10,000 tons a year. In the city of Chicago three plants are saving 74,000 tons by substituting electricity and water power for steam.

By the introduction of "skip-stop" schedules on all street railways, its is expected that another million and a half tons may be saved. Further savings have been made by consolidating ice plants, small power plants, etc.; by reducing outdoor lighting and advertising signs, and by obtaining greater economy in hotels, offices, apartment houses and public buildings. It is estimated that a million tons will be saved by a campaign to susbstitute tungsten electric lamps for the less economical carbon filament lamps. And by a process of distillation at a low temperature, it has been found possible to extract valuable oils and by-products from coal, and to make from the residue an excellent smokeless coal in briquettes, with a great saving of fuel.

Fuel has been conserved for essential war industries by limiting the amount used in brewing, in greenhouses, in the manufacture of wall paper, pianos, automobiles, building materials, etc. Exports to Canada have been reduced by agreement with the Canadian Fuel Controller. By a zone system of distribution, the railroad haul has been made as short as possible and the congestion of traffic prevented. By providing for the ordering of the winter supply of household coal in the summer months, mines have been kept busy that would ordinarily slacken down in summer for want of a market, and the winter load of coal on the railroads has been lessened.

During the coal famine last winter, much inferior coal was mined and sold. To prevent a repetition of that abuse, a vigorous inspection has been established, coal companies have been fined, and cars have been denied to the mines that persisted in shipping impurities.

In short, the Fuel Administration is attacking our coal problem from every possible angle. It is increasing production and reducing consumption without any disastrous disarrangement of our industrial balance. It is evident, however, that the greatest economies will have to be practised this winter in order to avoid another serious shortage.

Saving Raw Materials

The War Industries Board has added three or four million yards of cloth to our national supply simply by obtaining a reduction in the size of the samples of cloth issued by manufacturers.

It has made a similar saving in leather by reducing by one-half the number of styles of shoes that are manufactured and by limiting the height of women's shoes to nine inches.

The whole plan of its work is illustrated by the means it adopted to save paint. Manufacturers of house paint were putting out forty to one hundred different shades. Retailers carried large stocks, to have as many shades as possible on their shelves. By limiting the number of shades to thirty-two, the War Industries Board reduced the amount of paint that stood unsold on dealers' shelves. The same end was attained by standardizing the size of the can—that is to say, by discontinuing the making of half-gallon cans of paint or varnish and allowing none smaller than half-pints.

It has saved tin by providing for the substitution of other metals in metal bronzes, castings, solder, collapsible tubes and tin foil. In solder, for example, fifty per cent tin has been used and fifty per cent lead, although the Board now finds that forty per cent tin and sixty per cent lead was as serviceable a solder. This substitution means a twenty per cent saving.

It has saved steel by obtaining a seventy-five per cent reduction in the number of sizes and types of drills, plows, tillage implements, farm wagons, etc. It has saved rubber by reducing the number of types and sizes of pneumatic tires from 287 to 32; and, since all our raw rubber is imported, this means a saving also of ship tonnage. Wool has been saved by reducing the number of designs of fabrics manufactured and by eliminating those designs that were not economical in cutting. Labor and equipment have been saved in the delivery service of retail stores by organizing a co-operative delivery service and standardizing routes—so that, in one case, thirty-three department stores saved the labor of 303 out of 848 men, and freed 129 auto trucks out of 324.

All these and many other similar savings have been effected with the assistance and co-operation of the industries involved. There has been no friction and little hardship. Industries have been put on a war basis not by the imperial ukase of irresponsible authority, as in Germany, but by the patriotic willingness of the Nation to do everything in its power to help the war program. And through the War Industries Board, as through the Food Administration, the Fuel Administration and all the other war boards of the Government, the American democracy has shown its ability to organize for war as thoroughly as the most servile victims of military autocracy have been organized by the most crushing despotism of modern times.

* * * *

OUR NEW MERCHANT MARINE

WE have today, under contract and construction in the United States, 819 shipbuilding ways. That, says Mr. Hurley, is twice as many ways as there are in all the other shipyards of the world combined.

We turned out in the month of May more steel ship tonnage than we produced in the whole year 1915. In the month of July we more than doubled the May output. In the first five months of 1918 we produced 336,900 tons more than in the two years 1915 and 1916. In the next two months of 1918 we more than equaled the output of the first five months. From August, 1917, to August, 1918, we placed in service a million and a half dead weight tons, of which more than half was built during the last three months of that period.

Of our 819 ways, 751 are for the building of cargo ships. At our present rate of production, by 1919 we should be continuously building on each way an average of 6,000 tons of steel, wood and concrete ships. If we can average three ships per way in a year, we should turn out 13,500,000 tons in 1919. That is more than has been turned out by Great Britain herself in any five years of her history.

Our boats are not being built by private capital for private ownership. They are built by the United States Government. They will be controlled by the United States Shipping Board. They are being built by the people, and they will be owned by the people.

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The Jovian Annual Convention

Dallas, Texas

October 24-25-26—Hotel Adolphus

IN HIS selection of Dallas as the convention city this year, Jupiter Strickland had in mind two things: The fact that it was probably the most convenient city in Texas for all members of the fraternity, and the assurance of the complete co-operation of all the commercial and civic organizations of the city in the work of making the convention a success.

The convenience of the week-end dates, Thursday, Friday and Saturday, will allow members who live at a distance the holiday for their return, and only a very few will use more than four business days by attending.

The belief is general that the Jovian Convention should truthfully reflect that patriotic spirit of our Great Order and Industry which inspires us to devote our time and energies to serious-minded welding of all our resources into an instrument of constructive power, and direct it in the proper channel to be of the maximum service to our Nation in its war for Liberty and Humanity.

The paramount object of the Convention, therefore, is to perfect plans for delivering to our Government the greatest service which the Order is capable of rendering.

That characteristic which is possessed alone in the electrical field by the Jovian Order of furnishing a common ground upon which all branches of the industry may meet for the chartering of co-operative effort, will, as at its conventions of the past, be in evidence, and if there was ever a time in the history of the electrical industry, or a subject upon which its various branches could be brought together for one great harmonious effort, it is now that its greatest efficiency is needed by our Nation to prosecute the war to a victorious conclusion.

Plans both for this purpose and for financing the organization will be presented at the convention, that in the estimation of those of our members who have given them careful consideration, are highly feasible. Under the plan to deliver to our Government the maximum capabilities of the organization for war activities, there will be made possible a practicable method of intercommunion between all branches of the industry whereby a greater service may be rendered.

The plan which will be proposed for financing the Order has the enthusiastic approval of all the officers to whom it has been submitted for consideration, and, according to their belief, is a solution of the problem for financing that has been sought for several years. Although details of the plan may not be given out at this time, it can be said that it lifts the burden from the rank and file of the membership by a reduction of dues, while atthe same time bringing in a sufficient amount of revenue to offset losses from dues from enlisted members, and the depleting effect that war activities have had on the finances of the Order.

That such questions are of vital importance to the industry at this time are obvious; that the co-operation of the entire industry is essential to properly apply them is also apparent, and that the Jovian Order—the Dallas Convention of the Order—offers the logical place and time for the industry to be brought together in a practical effort to effect such ends should be just as evident.

It is also the belief of a large number of members of the Order that upon the proper decisions concerning these questions and some important amendments that will be considered, the future progress of the organization will depend. Upon their solution will evidently depend the question of whether the Order is to lie dormant as a National organization, continuing such activities separately as individuals, or local leagues, during the period of the war, or if it is to identify itself on a greater and more effective scale with war activities.

Certainly these questions need the attention of a large number of members, and attention to them can only be given by attending the convention. It certainly cannot be done by criticism after the convention adjourns.

It is therefore imperative that every Jovian who can possibly do so attend the convention, even if it should be necessary to make some personal sacrifice to do so.

There is a big task to be accomplished—the call of a duty to every member of the Order. It is worth making a personal sacrifice to discharge it.

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Personal Pointers

Say, Bill, do you remember Smith,
Who used to be a clerk?
Do you recall his steady ways,
And how he used to work?
Well, he has been promoted now,
And heads a big concern;
How men like him get up in life
I'd surely like to learn.

* * * *

A. W. Hartigan, Po. 14669, of 135 Broadway, New York ity, is now representative for the Electrical Alloy Company f New Jersey. Jovian Hartigan will represent the company in onnection with corporate matters.

* * * *

Lyman G. D. Morgan, Po. 10973, formerly with the sales orce of the National X-Ray Reflector Company of Milwaukee, now connected with the sales force of the Western Electric ompany, with headquarters at Seattle, Wash.

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V. L. Blanchard, Po. 10619, formerly special representative f the new business department of the Toledo Railway & Light ompany, Toledo, Ohio, is now new business manager for the rush Electric Company, Galveston, Tex.

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Thomas N. Mehan, Po. 3243, who until recently was con-ected with the sales department of the Electric Appliance ompany, Chicago, covering territory in the Central States, s now a member of the sales force of the Utilities Indemnity xchange, St. Louis.

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A. D. McMullen, Po. 20298, has resigned as general anager of the Capitol Electric Company, Salt Lake City, tah, to become president of the Motor Mercantile Company, f that city. The latter company handles exclusively wholesale utomobile accessories, as well as electric supplies.

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L. W. Helmreich, Po. 15681, formerly head of the electrical epartment of the David Ranken School of Mechanical Arts, t. Louis, Mo., is now engineer of the electricity, gas, heat and ater department of the Public Service Commission of Missouri, t Jefferson City, Mo.

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H. K. Williams, Po. 2483, secretary of the Cleveland Elec-ric Illuminating Company, has been elected a member of the oard of Directors of the Cleveland League to fill the place of . H. Ott, of the Westinghouse Electric & Manufacturing ompany, who has removed to East Pittsburgh.

* * * *

Charles A. Stanley, Po. 9690, who for the past several ears has been commercial engineer for the Kansas Gas & lectric Company, Wichita, Kan., was recently appointed eneral superintendent of that company. He will have charge f the detail operation of the company.

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Robert A. Bachman, Po. 11896, who for the past seventeen ears has been associated with the Edison Storage Battery ompany, Orange, N. J., as vice-president and general manager, as resigned with the object of securing a position with another ompany, in which he can devote more time to his personal ffairs.

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Brice H. Reid, Po. 14859, formerly president and chief wner of the Brice H. Reid Company, Elkhart, Ind., has severed is connection with that company and has formed the Reid lectric Supply Company. The Brice H. Reid Company ill continue in business under the management of Gene E. hmer.

RALPH S. MUELLER, Po. 7290, president of the Mueller Electric Company, Cleveland, who has just been elected president of the Cleveland League. Jovian Mueller has been an active member of the League since it was organized, and has also taken an active part in Jovian affairs. Last year he served on the League Development Committee. He was a "Captain" in the War Chest Campaign and a "Colonel" in the League's Thrift Stamp drive.

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Charles M. Rogers, Po. 14045, who has been results engineer for the Southern district of the H. L. Doherty organization for a number of years, is now a member of the Government dollar-a-year forces. He has the title of fuel oil engineer of the Gulf Coast district, with headqurters at New Orleans.

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George V. W. Ingham, Po. 816, Central Western field representative for the Bryant Electric Company for the past several years, has been appointed Eastern sales manager, with headquarters at the factory of the company at Bridgeport, Conn. Jovian Ingham will have charge of sales in the territory east of the Allegheny Mountains.

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George Williams, Po. 6849, who was recently elected a director of the Cities Service Company, a subsidiary of the Doherty organization, was recently made a vice-president of the Crew-Levick Company. Jovian Williams has supervision over the new business management of the Doherty company.

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Harry B. Joyce, Po. 19892, who for the past several years has been power engineer for the United Electric Company of New York City, has been commissioned a captain in the Quartermaster's Corps, U. S. A. Jovian Joyce's experience covers practically every phase of electric lighting. This, together with his special knowledge of refrigeration, led to his appointment.

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Capt. R. H. Hastain, Po. 6437, who before his enlistment was with the sales department of the Mid-West Electric Company, Omaha, Neb., is now in France with the 317th Field Signal Battery, 76th Division. Jovian Hastain saw service in the Philippines prior to 1909. After returning to the United States he entered the sales department of the Dean Electric Company.

* * * *

Alton W. Leonard, Po. 5165V, president of the Puget Sound Traction, Light & Power Company, Seattle, has been appointed a member of the National Committee of the War Camp Community Service. Jovian Leonard is chairman of the War Camp Community Board, and in the contemplated plan of merging the War Camp Community work with the American Library, Y. M. C. A. and Y. W. C. A., he will take a prominent part.

* * * *

P. D. Wagoner, Po. 3272, former president of the General Vehicle Company, Long Island, N. Y., has been elected president of the Elliott-Fisher Company, Harrisburg, Pa. After his graduation from Stevens Institute of Technology in 1896, he took the students' course of the General Electric Company, from which he was assigned to the transformer engineering department at Lynn, Mass., where he remained until May, 1900. In 1908 he was transferred to the executive offices of the company in New York City. In 1910 he was elected to the presidency of the General Vehicle Company.

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GUY E. TRIPP, Po. 143, who previous to enlistment was chairman of the board of directors of the Westinghouse Electric & Manufacturing Company, has been made a Brigadier General, U. S. A., and placed in charge of the administration of the work of the eleven district ordnance offices having charge of the production of ordnance material in their respective sections of the country. Prior to his promotion to the rank of Brigadier General, Jovian Tripp as Colonel was head of the Production Division of the Ordnance Department.

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W. H. MORTON, Po. 237, has been appointed general manager of the reorganized National Association of Electrical Contractors and Dealers. He had formerly been secretary of the organization, having served in that capacity from 1901 to 1913. At the time of its organization Jovian Morton took an active part in bringing the contractors together for the formation of the organization, and at its first meeting was appointed temporary secretary, and later elected to fill that position. He resigned in 1913 to devote his time to his business interests in Porto Rico. His new duties will be broader than those of former years, as the organization has extended its scope of activities.

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C. W. WARD, Po. 20163, formerly superintendent of laboratory, Duquesne Light Company, Pittsburgh, Pa., is now superintendent of light and power of the Citizens Light & Power Company, Oil City and Franklin, Pa. Jovian Ward has been connected with the Duquesne Light Company for the past seven and a half years, during which time he has taught electric wiring at night at the Carnegie Institute of Technology. He served at one time as president of the Duquesne Light Company Section of the N. E. L. A., and in 1912 as chairman of the lamp committee of the Pennsylvania Electric Association.

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OBITUARY

ELBERT B. PECK, Po. 18220, vice-president and controller of the Indianapolis Traction & Terminal Company, and of the Terre Haute, Indianapolis & Eastern Traction Company, died August 24, after a long illness. His ailment was a tumerous growth on his lungs. Jovian Peck had been associated with the two companies since 1899, going to Indianapolis from Kansas City, Mo. He was made vice-president of the Indianapolis Traction and Terminal Company in 1906, and was a director of the Terre Haute Traction & Light Company. At one time he was president of the Central Electric Railway Association.

* * * *

D. J. CAVANAUGH, Po. 14422, who was connected with the signal department of the Illinois Central Railroad at Memphis, Tenn., died at St. Joseph Hospital in that city August 20, after an illness lasting but a few hours. He became ill while at work about half past nine o'clock and died at 12:15. He was unmarried, and is survived by a married sister, Mrs. Annie Elliott, of Jackson, Miss., to whom we extend the sympathy and condolences of the fraternity.

* * * *

WHAT YOUR SUBSCRIPTION MEANS

WHEN you subscribe to a Liberty Loan you subscribe to the sentiment that the world must be made safe for democracy and subscribe to the fund that is to make the world safe for democracy.

You subscribe to the belief that innocent women and children on unarmed ships shall not be sent to the bottom of the sea; that women and children and old men shall not be ravished and tortured and murdered under the plea of military necessity; that nurses shall not be shot for deeds of mercy, nor hospital ships be sunk without warning, or hospitals and unfortified cities be bombed or cannonaded with long-range guns.

You subscribe to the doctrine that small nations have t same rights as great and powerful ones; that might is not rig and that Germany shall not force upon the world the domin of her military masters.

You subscribe, when you subscribe to a Liberty Loan. the belief that America entered this war for a just and no cause; that our soldiers in France and our sailors on the s are fighting for right and justice.

And you subscribe to the American sentiment that th must and shall be powerful, efficient, and victorious.

* * * *

MILWAUKEE REJUVENATION

FIRST Tribune, Irving R. Douglas, Po. 18360, was in charge of the Rejuvenation held at the Forst Keller Hotel in Milwaukee, Wis., on the evening of September 10. Forty-two members of the League were present to participate in the affair. Among the candidates initiated was William A. Reed, electrician for the city of Milwaukee.

The lecture form of initiation was used, and was delivered by Carl Golin, Po. 12385V, Statesman for Wisconsin, in a very impressive manner.

At the Joviation which followed, G. J. Kirchgasser, Po. 15435, presided as toastmaster.

Addresses were made by H. E. Brauns, Po. 16618; William Baum, Po. 19082; F. V. Ziekurst, Po. 16625; H. F. Trester, Po. 17656.

Among the workers who from reports deserve special mention for their aid in making the affair a success are: Charles J. Brewster, Po. 15982; A. L. Engle, Po. 18991, and A. F. Kiefer, Po. 19976.

Many interesting features, together with prevailing business conditions, were discussed, and the affair was a most enjoyable and successful one.

* * * *

LETTERS FROM THE BOYS AT THE FRONT AND IN TRAINING WANTED FOR Y. M. C. A. CAMPAIGN

NO doubt every citizen of the United States realizes the value of the work being done by the Y. M. C. A. in keeping up the morale and in contributing to the comfort of our soldiers, but it remained for General Pershing to reduce the activity of that organization to a fixed value, or at least to as near a fixed value as such a service may be estimated:

"Give us nine men and the Y. M. C. A. and we will have a more effective fighting force than as though we had ten men without the Y. M. C. A."

This estimate came unsolicited from Gen. Pershing's headquarters, and so far as the American people are concerned that should be the highest authority on the subject.

The Y. M. C. A. will inaugurate a campaign for funds in November, and we are anxious to aid in every way possible. We would like to have letters from the boys at the front and in the training camps to use in this connection—letters containing some mention of the work the Y. M. C. A. is doing, and we request members who have received letters of that nature to lend them to us for that purpose.

We will also be glad to receive letters from the relatives of our members at the front of general interest, even though they do not contain any mention of the Y. M. C. A. work.

We feel certain a number of our members have interesting letters from the boys at the front, and request that they help us make the appeal in THE JOVIAN a strong one. If you will forward any letters you may have to us, we will return them as soon as a copy is made.

THE JOVIAN
1415 Syndicate Trust Bldg.
St. Louis, Mo.

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News of the Jovian Leagues

hicago "Entertaining Tommy Atkins" was the subject of an address before the Chicago League, ptember 12, by Miss Ada Ward. It was a witty and humorous scription of her experiences as Official Entertainer to "Tommy tkins" in France, and she pictured by words and cartoons the man side of the British soldier gleaned from behind the lines. This was the first regular luncheon meeting of the season.

* * * *

t. Louis September 3, the St. Louis Jovian League members were guests of the St. Louis Advertising Club at a joint luncheon held at the Statler Hotel. Lieut. . Newberry Choyce, of London, who was wounded in France nd is now connected with the National Shipping Board, was he speaker, and made and excellent address.

The regular season of the League opened with a luncheon the Statler Hotel September 3. The new officers of the eague presided and were officially introduced. They are: . H. Waddington, Po. 5176V, president; B. H. Mann, Po. 6756, vice-president, and George McD. Johns, Po. 9052, ecretary-treasurer.

An outline of the activities of the League for the coming ear was given. Matters to be taken up at once are: War ork in various movements, educational classes and the work compiling a year book of the local industry.

A review of the work of the League during the past year, ven by Secretary Johns, showed the number of important ovements that had been inaugurated and accomplished.

Fred Johnson, Po. 177V, chairman of the Speakers' Committee, gave an outline of what will be attempted in the way securing prominent speakers to address the League during he coming year.

The League will continue to hold its weekly meetings, as the past, but it was decided to hold one night meeting each onth, instead of a noonday meeting. Arrangements were so effected to hold one joint meeting each month with the dvertising Club and the Rotary Club. The latter arrangeent will insure a very large attendance and prove an incentive r prominent speakers to address the organizations.

About 125 members were in attendance at the opening eeting, which proved to be an exceptionally satisfactory one.

The League inaugurated its first night meetings at the issouri Athletic Association September 17. L. A. DeBlois, fety engineer for the Dupont-DeNemours Powder Company, as the speaker of the occasion, and took for his subject, Safety and National Efficiency." Mr. DeBlois, who has on s hands one of the biggest, if not the biggest, safety job in e world, described how his company had reduced the death te from accidents from nine per thousand per year to less an one per thousand per year. The Dupont-DeNemours mpany employs about 34,000 people, and manufactures arly every kind of explosive known to science, and their death rate from accident is now much under that of a number of industries not considered nearly so hazardous.

* * * *

Cleveland Ralph S. Mueller, Po. 7290, has been elected president of the League to succeed H. L. Schneider, who, after twenty years of service with the Cleveland Telephone Company, has resigned to accept a position with the Interlake Engineering Company, a concern now building boats for the Government. He also found it necessary to resign as president and director of the League.

Plans have been made to have a regular cafeteria luncheon service daily in the lunch rooms, on other than regular luncheon days.

Clarence L. Collins, president of the Reliance Electric & Engineering Company, was the speaker at the luncheon meeting September 18. His address was devoted to: "The Activities of the War Service Organization of the Electrical Industry" in connection with the Priorities Committee of the War Industries Board of Washington.

P. B. Zimmerman, Po. 7305V, publicity manager of the National Lamp Works, and director of entertainment for the League, presided as chairman of the meeting.

* * * *

Men vs. Capital

By W. R. J.

THE need of capital, of course, no man may term a myth,
You've got to have the capital to start a business with,
But capital is just a tool, and nothing more nor less;
You've got to have both brains and grit with it to win success.

Pick out the greatest business house, or poorest in the land,
Just watch the way each operates and then you'll understand;
Discover what there is about the one that makes it grow,
And what the hindering causes are that make the other slow.

Suppose you'd change the men who run these two concerns today,
And give each force the other's place, and let them have their way,
Which business would you back to win, or show the greatest gains,
The one that has the capital or that which has the brains?

There's many a growing enterprise that once was very small,
And you, no doubt, have lived to see some pretty big ones fall;
So if you'll look into the case you'll find this rule applies:
It takes more brains than capital to run an enterprise.

It takes more brains than capital, and other things, to-wit:
The kind of nerve and energy that don't know how to quit;
Just what there was to start with and the business field and plan
Are mostly incidentals, for the main thing is the man.

The Dallas Convention of the Jovian Order offers an opportunity for every member of the fraternity to be of some service in shaping its plans for being of greater assistance to the Nation in war activities. The object will be to deliver the maximum service the Order is capable of rendering to the Government. To be able to do this it will be necessary to have the support of a large number of members, and that support in evidence at the convention.

DALLAS, TEXAS, OCTOBER 24-26

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

Your Share

By W. R. J.

There is an extra job to fill,
Perhaps the desk beside your own;
There is an extra field to till,
Someone now absent might have sown.
Where war fires flash across the sea,
The man you used to notice there,
Now faces Fate's unknown decree,
Expecting you to do your share.

There is an extra task to do
Beside you in the field or mart;
The man you miss now fights for you,
And you in turn must do your part.
Take up the burden with a will,
And though the task may tax your might,
Strive doubly hard the place to fill,
For he who left it went to fight.

Some day your neighbor may return,
But should he come or should he fall,
There is an extra wage to earn,
You may not shun the silent call.
Take up the burden, it is yours,
The time will come in God's great plan,
When you must list your toil and stores
And face your soldier man to man.

* * * *

Ye Travelynge Salesman

TAKE heed of ye travelynge salesman; his fortitude is as a stone walle, his egotism beyond comprehension. Observe him at his daily labor, and note how he bringeth in ye bacon.

In ye mornynge he aryseth in ye hotelle and taketh fyrst his plunge in ye wash basyn. Then he calmly counteth his smalle change to dyscover what was left over from ye nyght before; donneth his rayment and seeketh ye dinynge roome.

In ye prohibytion towne he goeth strayght to ye dinynge roome. In ye open towne he goeth fyrst to ye place of refreshment, where he lyngereth accordynge to his capacityes and controlle.

At ye dinynge table he gyveth his order and flyrteth with ye waytresse, if she be not oulde and homelly. Then he readeth ye paper, and flyrteth some more with ye waytresse when she bryngeth his breakfast.

While he eateth his breakfast he disturbeth his neyghbors with his knowledge of ye war, and betimes knocketh ye food and ye hotelle service, and kicketh about ye raylroad trayne.

When he finysheth his breakfast he smyleth at ye waytresse, and tippeth her if she smyleth back.

He pauseth at ye cashier's cage to pay his bille and getteth a toothe picke, and starteth a conversation with ye lady cashier. If ye lady cashier talketh back he passeth ye complyment and shooteth ye bunk and buyeth ye ten-cent cigar.

Then he goeth forth into ye hotelle lobby and asketh for his maile, and readeth ye vehement letter from ye sales manager, which asketh him when he will returnne from his vacation, and if he contemplateth resumynge his vocation of salesmanshippe.

This maketh him madde and he getteth a shyne, and buyeth another cigar.

When his anger subsydeth he reflecteth on ye counsel of ye sales manager's epistle which admonysheth him to hit ye balle, and a fear creepeth into his domme that he might get ye canne attachment, so he decydeth it is time to selle ye order.

For ye purpose of keepynge his namme on ye fyrm's pay-r and expense accounte he taketh his grippe in hand and go forth to spielle ye bunk strongly.

If ye bunk worketh and ye large order is booked quick he calleth it a day and returneth to ye hotelle to send it in and getteth back at ye sales manager by maile. If ye war breeze bryngeth not ye bacon, he worketh and sweateth trayne time, and diggeth out for ye next towne, where writeth ye sales manager that ye business is on ye bumme. ye people have gone to war, ye crops are so poore there be no harvest, but that he has promyses for bigge orders come in by maile from alle fyrms, and that he has beat competytor's salesman who didn't get even a promise, a that his prospects for ye future are so roseate ye fyrme soon be workynge day and nyght gettynge out ye orde

* * * *

Curbstone Reflections

By W. R. J.

O, Foolish Man, puffed up with pride!
In your big car your proudly ride;
With haughty looks you seem to scan
The face of each pedestrian,
But on your features I can trace
The worry you cannot efface.
I read your thoughts as you pass by:
"The cost of gasoline is high;
I've got to buy a set of tires;
Does my insurance cover fires?
The paint is getting dull again;
Those dented guards show up too plain;
The commutator's spark is weak;
I think my tank has sprung a leak;
My left hind tire is getting flat—
I wonder what's the cause of that?
That traffic cop has got a grudge,
I hope it's not, 'Good morning, Judge!'
This brake is loose—too loose by far—
I barely missed that trolley car!
I hope I find some place to park;
My lights are out and it is dark."
These thoughts and others you would hide,
As down the street you swiftly glide.
Your feeble efforts to deceive
Are comical, for few believe
Your life is one gay round of joy,
Devoid of worries that annoy.
O, Foolish Man! as you pass by,
'Tis irony for you to try
Behind a mask austere, serene,
Perturbing thoughts like these to screen.

* * * *

Broken English

AN English army officer, whose home is in London, a who is touring the United States in the service of t National Shipping Board, has had an interesting experience connection with his pronunciation. Prior to his enlistment the English army, he had taken a degree at one of the lead colleges in England, at which he had specialized in Engl with the object of becoming an author, a fact that makes experiences all the more unique.

"After an address before an audience in Wyoming," relates, "a young girl came up to congratulate me.

"'I do so love to listen to you talk in broken Engl Lieutenant,' she exclaimed."

At the luncheon in St. Louis where the officer related incident, the chairman who introduced him to the audie concluded his remarks by saying:

"It gives me great pleasure to introduce to you a man fr a nation that speaks our language."

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400 COLLEGES CO-OPERATING WITH ARMY TRAINING CORPS

MORE than 400 colleges have responded to the War Department's call for co-operation in training the new branch of the army, the Students' Army Training Corps. Plans are being made to convert fraternity houses and dormitories into barracks for the period of the war to meet this new emergency of training boys of 18 years and over in institutions used as cantonments.

The Students' Army Training Corps has two branches—the collegiate, to which men qualified by high-school graduation are eligible, and the vocational section, to which grammar school graduates are eligible. Recruits will be procured by voluntary induction. Student-soldiers will not be in a deferred class, but will be on active duty and on private's pay. High-school graduates are urged to enroll in colleges this month to await induction upon application in October.

Types of Colleges Included

The following types of colleges are included in the Students' Army Training Corps:

Arts and sciences, technology, engineering, mines, agriculture and forestry, business administration, industry and commerce, veterinary medicine, education, law, medicine, dentistry, graduate schools, normal schools with two years' college work, junior colleges, and technical institutes.

The following colleges have recently been accepted by the War Department's committee on education and special training:

Dakota Wesleyan University, South Dakota; Yankton College, Yankton, S. Dak.; State Normal College, Springfield, Mo.; West Kentucky State Normal School, Richmond, Ky.; Lenoir College, Hickory, N. C.; Billings Polytechnic Institute, Billings, Mont.; Kentucky Wesleyan College, Winchester, Ky.; Transylvania College, Lexington, Ky.; St. Francis College, Brooklyn, N. Y.; College of Charleston, Charleston, S. C.; Cumberland University, Lebanon, Tenn.; Ogden College, Bowling Green, Ky.; Bethany College, Lindsborg, Kans.; Carson and Newman College, Jefferson City, Tenn.; East Tennessee Normal School, Johnson City, Tenn.; University of Minnesota, Minneapolis, Minn.; Augsburg College, Minneapolis, Minn.; Thiel College, Greenville, Pa.; Missouri Wesleyan College, Cameron, with William Jewel College, Liberty, Mo.; Baldwin Wallace College, Berea, Ohio; McKendree College, Lebanon, Ill.; Middle Tennessee State Normal School, Murfreesboro, Tenn.; Hahneman Medical College, Philadelphia, Pa.; University of Nebraska, Lincoln, Nebr.; Baltimore College of Dental Surgery, Baltimore, Md.; Burleson College, Greenville, Tex.; Illinois College, Jacksonville, Ill.; Lake Forest College, Lake Forest, Ill.; Colorado State Teachers' College, Greeley, Colo.; Huron College, Huron, S. Dak.

* * * *

OUR INDIVIDUAL PART

SOME observers think that the most characteristic thing about the American soldiers in France, something which astounds the enemy and excites the admiration of our allies, is the capacity of the American soldiers to do individual thinking and fighting. The German fights successfully only in mass formation, in organized bodies, while every American soldier has an initiative and independence of action which gives him remarkable efficiency in open fighting. They are not senseless cogs, but each is an individual working unit in a great fighting machine.

Every American at home should feel an individual responsibility and do his or her individual part in winning the war. There is not an American citizen who can not help win the war. The Fourth Liberty Loan drive, which begins September 28, offers a great opportunity for concerted action and for individual action, and the loan will be a tremendous success if each American will do his or her individual part as each American soldier in France does his part. Our soldiers deserve such support from the people at home.

* * * *

A DAILY DUTY

EACH day every American soldier in France is confronted by a great duty. Our army there has a great task to perform for our country, for the world, for civilization, and for humanity. Our soldiers are doing their duty with a courage and fidelity and efficiency that thrills every heart.

Each day every American citizen at home is confronted by a great duty, a duty as imperative upon him or her as the duty of our soldiers is upon them. The American people have a great task to perform. It is to support to the limit of their ability our army, our navy, our country at war.

To work with increased energy and efficiency so that our national production may be increased; to economize in consumption so that more material and labor and transportation may be left free for the uses of the Government; and with the resultant savings to support the Government financially is the daily duty of every American. It is a duty that will be met by every American whose heart is with our soldiers in France, who glories in their courage and fighting ability and their success.

DALLAS CONVENTION HOTEL RESERVATIONS

IMPORTANT

SEND IN THIS BLANK WITHOUT DELAY

HOTEL RATES	ADOLPHUS HOTEL CONVENTION HEADQUARTERS	ORIENTAL HOTEL	SOUTHLAND HOTEL
SINGLE ROOM, WITHOUT BATH	$1.50 UP	$1.50 UP	$1.50 UP
DOUBLE " " "	2.50 "		2.50 "
SINGLE " WITH "	2.00 "		2.00—2.50
DOUBLE " " "	3.00 "	2.00 "	3.50—4.00

PLEASE RESERVE FOR ME_____ ROOMS

RATE_____ PER DAY FOR THE DATES OF

OCTOBER_____, AT THE

HOTEL_____

YOURS TRULY,

FILL IN, SIGN THIS COUPON AND MAIL TO **A. HARDGRAVE, PO. 20609,** CHAIRMAN HOTEL COMMITTEE, 1302 SOUTHWESTERN BUILDING, DALLAS, TEXAS.

MAIL AT ONCE TO INSURE RESERVATION.

NAME_____ PO._____

ADDRESS_____

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FACTS—

The interest aroused by th tabulation of Jovian Insuran facts which appeared in ou September number, prompts u to repeat the figures herewith.

Proof of the Claims We Have

Actual Saving to the Membership in the Matter of Premiums

JOVIAN INSURANCE IN FORCE AUGUST 15, 1918

	Policies	Amt. of Ins.	COST (Premium)	SAVING
Accident	348	$2,185,000.00	$5.015.00	$5,470.00
Health	218	570,000.00	4,560.00	3,420,00
	566	$2,755,000.00	$9,575.00	$8,890.00

This same amount of insurance at standard rates would have cost the policy holders per year..... $18,465.00

Percentage of saving on accident policies alone ($5,470.00) compared with the actual cost ($5,015.00)..... **109%**

Percentage of saving on Jovian Health Insur. ($3,420.00) compared with actual cost ($4,560.00) **75%**

Percentage of total saving ($8,890.00) compared with total actual cost ($9,575.00) **92%**

Percentage of saving ($8,890.00) compared with cost, at standard rates ($18,465.00)..... **48%**

Clip and Mail the Coupon Today

Net Saving to the Policy Holde
Cash Benefits Received by t

If you so desire, date your application to take effect when some of your present insurance expires—pay not until you receive the policy

The Jov
SYNDICATE TRU

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Here is where practically every Jovian can save money. In other words, Jovian Insurance provides complete protection at cost—stripped of all commissions and solicitation expense.

—FACTS

Made For Jovian Insurance

Cash Payments Made to Jovians in the Way of Benefits

JOVIAN INSURANCE CLAIMS PAID

1	Death	$5,000.00
15	Accident	898.83
18	Illness	623.16
	Total	$6,521.99

The Proof of this Pudding lies in the hearty appreciation registered by the participants, one of whom writes—

"Attached is your receipt covering remittance of $35.71.

"Your courtesy and promptness in settling the matter is surely commendable.

"I wish more Jovians were availing themselves of the merits and service ideals back of the Jovian Accident and Health Policies."

.....*$8,890.00*

nsurea..... *6,521.99*

tal Gain.....*$15,411.99*

n Order

LDING ST. LOUIS

Every dollar you invest in Jovian Insurance, releases nearly another dollar for your other pressing needs

Sign—Tear Out—Mail NOW!

THE JOVIAN ORDER

GENTLEMEN:

Send me complete information relative Jovian Accident and Health Insurance at greatly reduced rates.

(*Signed*) .....

(*Address*) .....

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The Toast

By W. R. J.

HERE'S the toast of the day,
Hold your glasses up high,
Stand erect and be sure
There's a gleam in your eye;
Turn your face to the east,
Let it ring on the air—
Here's the toast: To our boys
At the front "over there"!

In the toast that you give
Let a message be sped—
To the living a cheer
And a tear for the dead;
To our boys at the front
In all parts of the world,
Where the stars and the stripes
By their hands are unfurled.

Oh, we knew they were brave,
And the way they would fight;
And we knew that the plans
Of the Hun they would blight;
But the thrill that we feel
As we read of their deeds,
All the hopes that we held
Of their valor exceeds.

So we'll drink to them all,
On the sea and the land,
And we'll mean by the toast
We are going to stand
Back of them to the end,
And the burden we'll share—
Here's the toast: To our boys
At the front "over there"!

* * * *

THE ARMY'S HEALTH

By HARVEY O'HIGGINS

Associate Chairman, Committee on Public Information.

DURING the Mexican War, the annual death rate from disease among our troops was 100 men out of every thousand. During our Civil War, the rate was as high as 60 out of every thousand. During our Spanish-American War, it was 25 out of every thousand. Now the Surgeon-General's office reports that among our troops at home and abroad, the annual death rate from disease fluctuates from less than 2 per thousand to slightly more than 3 per thousand.

This is an incredible record. The best of all previous performances was in the Russian-Japanese War, when the annual death rate from disease among the Japanese troops was 20 per thousand. Our present rate is about one-tenth of that. The annual death rate from disease among American men of military age in civil life is 6.7 per thousand. Our army rate is about one-third of that.

And the miracle has been achieved not by any one medical discovery or precaution, but by a campaign of administrative vigilance that has used every means to protect and promote and assure the health of millions of men.

At the outbreak of the war the most skillful physicians in America were drawn into the service. The camps and cantonments were located by sanitary experts. The plans for the buildings were reviewed by civil medical boards after these plans had been passed by the army authorities. Neither local influence nor political pull was given any consideration in placing the camps or in building them.

A system of thorough inoculation against typhoid, malaria, and the so-called "water diseases," completely eliminated the infections that caused 85 per cent of all the deaths from disease during our Spanish-American War. A similar campaign of prevention and of education was similarly successful against venereal diseases. When the recruits were first gathered together in the camps, the annual hospital admission rate for venereal diseases was as high as 400 out of every thousand men. Now, among our Expeditionary Forces in France, that rate is as low as 44 per thousand men. Among the recruits last winter, measles became epidemic, followed by pneumonia and empyema. Effective preventive measures have now been established against the spread of measles, and the medical department has ascertained the cause of empyema and found a successful method of treatment. At Fort Riley, Kansas, there were 85 cases of empyema under treatment from October 20 to January 29, and of these 52 died. From January 29 to April 30, there were 69 cases treated by the newly discovered method, and only 6 died. That is to say, the most serious epidemic disease which the army had to combat last winter has now been overcome, and the danger of another such epidemic has been averted.

* * * *

A LETTER OF APPRECIATION

LAST summer during the hot weather a call came to the St. Louis Jovian League from the Red Cross for fans for the working rooms of the organization in various parts of the city. A committee was appointed, composed of the following members: Cliff R. Croninger, Po. 9624-60V; Bruce Cameron, Po. 10790, and F. E. Briner, Po. 11551, and sixty fans were secured and distributed.

The following letter shows how they were needed and appreciated:

E. H. Waddington, President,
St. Louis Jovian League of Electrical Interests,
c/o Western Electric Co.,
810 Spruce Street, City.

My dear Mr. Waddington:

In behalf of the Red Cross and the ladies who are working day after day during this hot weather in our work rooms, I wish to express our appreciation of the efforts of the Jovian League in obtaining electric fans for our use. I do not know whether you fully appreciate how disagreeably hot our work rooms would have been without these fans, inasmuch as most of the rooms are not made for factory purposes, and possibly without the proper ventilation, and during the intensive heat would have been intolerably hot if it had not been for the result of your efforts.

Will you please extend to the members of your organization our heartfelt thanks, and say for me that their example in voluntarily doing this work only inspires us in the Red Cross to greater efforts.

Thanking your organization again, and assuring you of our deepest appreciation, I am,

Very truly yours,
L. C. MURDOCK,
Executive Secretary,
St. Louis Chapter, American Red Cross.

* * * *

Mark Your Calendar Now

October 24-26, 1918, Dallas, Texas

THREE DAYS OF CONSTRUCTIVE DEVELOPMENT

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Shall We Fill The Hand That Slays Our Sons?

THE other night one of General Pershing's boys went out into No Man's Land. He didn't come back. Three hours later a searching party went out to find him. That boy had been killed and his body hacked to bits. His comrades gathered up the remains and brought them back in a sack. That brave young American was chopped to pieces with German cutlery. Before the war we bought two million dollars' worth of German pocket cutlery each year.

In the past three years American factories have vastly increased their output of pocket knives. Patterns have been simplified; quality has been improved; an American industry has been encouraged and developed; "Made in Germany" on a knife blade carried in an American pocket has become but a distasteful memory.

Shall we be customers of these blood-stained butchers after the war? I hardly think so; but it is up to you, Mr. Buyer.

A captured British officer was recently found with his throat cut from ear to ear. This brutal job had been done with a very keen-edged instrument. It was not the work of a trench knife. The ghastly wound looked as though it had been made with a razor. It probably was. Before the war we imported annually half a million dollars' worth of razors from Germany.

Since the war began razor factories in the United States have enjoyed a greatly increased business. Their employees are well paid, contented Americans. This industry must be perpetuated. German competition in the days to come should suffer a handicap in proportion to German crimes of today.

When the dove of peace lights in the pool of blood, shall we go on buying German razors? It doesn't seem possible; but, Mr. Buyer, it's up to you.

Two Canadian Red Cross nurses outraged. Their hands chopped off, and their tongues cut out that they might never tell the hideous story of the frightful wrongs perpetrated upon them. In America hundreds of thousands of Red Cross workers are using shears and scissors to make bandages. Before the war we bought 600,000 dozen shears and scissors from the Central Powers annually. American factories making scissors and shears are busy places now, and they are making very good scissors and shears. After the war, German or American? Mr. Buyer, it's up to you.

Belgium, poor, brave, outraged little Belgium! When Germany threw to the winds a treaty she termed a "scrap of paper," she not only shredded her honor, but tore to bits business contracts that will never be pasted together again. America has fed starving Belgium. We fed, and clothed and cared for her suffering people long before we became her proud ally on the battlefields. Thousands of orphaned Belgian and French children have been adopted into American homes. In the days to come are we going to force these children to play with German-made toys? God forbid! American toy manufacturers have stripped us of the last vestige of an excuse for the purchase of toys from the Huns. Our factories are making more toys than we ever imported, and they are not the flimsy jim-cracks we formerly bought from abroad. They are largely exercise toys which develop a child's body, or mechanical or structural toys which train the mind. Before the war we imported eight million dollars' worth of toys from the Central Powers. Who will make our kiddies' toys in the days to come? Once more, Mr. Buyer, it's up to you.

A few weeks ago the Llandovery Castle, a Red Cross hospital ship, was sunk by a German submarine. That great ship was fully equipped to care for wounded, suffering soldiers. Its only passengers were doctors and nurses. It was marked with a great red cross made of red electric lights. The sides of that ship were illuminated, showing for miles away the character of the vessel. There was no possible chance of mistaking the Llandovery Castle for anything but a hospital ship. And damn them, they deliberately torpedoed that ship and took American doctors from the open lifeboats and abused them. The shock of this distinctly brutish act was a little softened by the fact that we have been pretty well trained to expect such atrocities from the Austrians and Germans, who have deliberately shot our doctors, outraged our nurses, bombed our hospitals and destroyed other hospital ships. It is Kultur spelled with a "K."

Before the war we imported from the Central Powers practically every surgical instrument used in America, not because we couldn't make them, but because the volume of such business was comparatively small and the Germans made a specialty of hand-made surgical tools. The other day in Washington I saw the set of surgical instruments adopted by the medical chief of our army. Practically every instrument could be readily made by any of our plier manufacturers, and the orders are running into such quantities that they will be stamped out as are American-made pliers. In the days to come will those American surgeons who are seeing and caring for the thousands of victims of Hun atrocities ever permit themselves to forget sufficiently to purchase a surgical instrument made in Germany? Never! The memory of those doctors and nurses who lost their lives in the Llandovery Castle murder cry in protest even against the thought. The Germans may ship their instruments over here without identifying marks? Not if true Americans are in the purchasing department. Is Germany's surgical instrument business dead in America? Mr. Buyer, it's up to you.

Say, loyal American, how would you have liked to have your wife in the town of Gembloux when it was captured by the Germans? Scores of innocent people were butchered there. The raping of women and young girls was common and continuous. One young woman was outraged by several soldiers, stripped naked and fastened to the door of her own home by a cutlass driven through her chest with sufficient force to hold the body to the heavy panels. Her breasts were brutally cut off and with her head hanging, and her hair flying in the wind, the body of that poor young martyr stiffened in death. Horrible, yes, more hideous than the Indian massacres that caused our pioneers to shudder in the early days of the West. Brutal and beastly. You may well thank God that your loved ones were not in Gembloux.

Before the war we imported annually millions of dollars' worth of kitchen enameled ware from Germany and Austria. These utensils were used in the kitchens of American homes. There was probably some of the same ware in the kitchen back of that blood-stained door in Gembloux.

Before the war American manufacturers had made great strides in the manufacture of enameled wares. Their goods were favorably known in every State of the Union, yet in almost every American town there was a line of heavy-coated colored wares and of white enameled wares that came from the Central Powers. The blockade against their shipping quickly broke these foreign-made stocks and the odds and ends were cleared up with special sales. Complete lines of enameled wares made in our factories have replaced them. Will German and Austrian enameled wares go onto our shelves again when the Kaiser and his Prussian war maniacs are whipped? Will we swallow the story that all the Germans were forced into these atrocities with absolute proof that the Bavarians worked single-handed and in apparent glee at many of these hellish outrages? It would seem that a good American would starve rather than foul his lips with food from a German utensil. That's the way it looks, but after all it's up to one single class of Americans, over whose doors are lettered the big word, BUYER.

Postal cards. We have used millions of them to say a brief hello to the folks at home when we were on the road. Postal card holiday greetings, postal birthday congratulations, postal cards that could be written quickly and mailed with ease when pleasure or business, magnet-like, speeded the use we made of

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our time. For the past three years postal cards have frequently told brief stories so direct in their wording that the full shock of their horror equalled or excelled those telegrams from the War Department which are bringing home to us the price we are paying for democracy.

Imagine a postal card telling that your son had lost his third finger, deliberately cut off from his hand that a Hun might become possessed of the ring he wore.

Picture the postal that told you of the burning of the lunatic Asylum at Obourg, Belgium, and of the frightful death of the 200 insane women who were being cared for in that institution.

Read the postal that might tell truthfully of that French woman eighty years of age who was raped at Lahoussoye.

Another mail and the postal that tells of the women and children at Mons who were forced to march on their own soldiers, acting as a screen for the German troopers. Read that the fifty who refused to go were bayoneted. You might receive fifty postals, each telling of similar acts which can be verified. Read and then calm yourself to the statistics that inform you that before the war we purchased souvenir post cards and lithographs from Germany to the amount of nearly two million dollars annually.

Do it again? Surely not while we are in our right minds. Sign our names to a postal card made in that empire of rape? My God, no; and that we may never be tricked into unconscious violation of this just resolve, Mr. Buyer, it's up to you.

In a little French village well within hearing of the incessant boom of the Kaiser's cannon, Isaac Marcosson, that great American writer, applied for lodging one night at the cottage of an old French woman. She greeted him courteously, but before she asked him to sit down took him to the side of her fireplace and pointed to the wall. Pinned to a little French flag were three little metal tags with the identification numbers of her three sons. Below each tag was pinned the French Croix de Guerre. As Marcosson stood at salute, paying his silent tribute to the immortal dead, and to this brave old lady's supreme sacrifice, she took from the mantel a French wrist watch. Her last boy had worn it until a German grenade had ended his brave effort to stem the unprovoked invasion of the land he loved better than life. One of his comrades had taken that watch from his wrist, wound it up and sent it back to the old mother in the village back of the Marne. It was still running when it was put into her trembling hand. To her the ticking of that watch, said Marcosson, is the beating of that boy's heart, and as it registers the passing of time it is also registering the passing of a cursed power that has been allowed for half a century to prepare colossally for the brutal domination of the world. Is this just another story to tug at your heart strings? You be the judge. Before Germany and Austria turned loose their hellish hordes, we imported annually from them over a million dollars' worth of clocks and watches.

Millions of graves have been filled with brave young men who were alive, happy and ambitious three years ago. The wrist watches of many of those boys have come back with their little tin tags. There is no necessity for us to buy timepieces from these peoples who have so titanically and treacherously caused the death of the flower of this country's manhood. There are plenty of good clocks and watches manufactured right her at home, and in the days to come keep that in mind. Mr. Buyer, you are going into the front-line trenches to protect us from such merchandise. In the name of that old French mother, watch your step.

"Music, that sublime art which affects the passions by sound. Few who have not felt its charms and acknowledged its expressions to be intelligible to the heart."

Music outraged. Raise the curtain of Kultur ever so little and peek at those villages of France and Belgium occupied by the invaders. Before your ever-widening, horror-struck eyes is an unearthly panorama of encouraged lust. Villages burning everywhere, the streets strewn with the viciously flung bodies of the helpless inhabitants. From a house before you comes the terrified shrieks of a young girl who is being outraged. Suddenly the door of this house is burst open and an old man is hurled into the street. It is the grandfather of the girl whose screams make your blood run cold. He is seventy-five years of age, and has gone to her rescue. As the forcefully impelled body of that courageous old gentleman strikes on the cobblestones the crowd of half-drunk soldiers, on whose belts you see inscribed, "Gott is with us," begin jumping with fiendish glee upon him. Their heavy, hob-nailed marching boots quickly reduce his frail old body to a battered, bloody mass.

No, Mr. American, there are not hallucinations of your own imagining. They are actual sights made hideously clear by burning buildings which are being wantonly destroyed. Then you see a load of straw on a quaint two-wheeled cart coming down the street. It is stopped. Oil is thrown over it, and in its highly inflammable state the willing hands of the Huns throw it into a cellar where a large number of women and children have taken refuge. And then, merciful God, a laughing soldier of Wilhelm, the Brute of Berlin, scratches a German-made match and one more absolutely inhuman atrocity has blotched the historical page of a couple of nations whose thin veneer of civilization has been scraped away in a war that is but a few days old. Where? Well, the name of the town was Charleroi.

And from up the street came the sound of outraged music from stolen gramophones, accordions and a pianola. The officers were singing. A musical entertaiment in celebration of a victory.

Before the war, musical instruments, gramophone motors, player pianos; yes, we bought a lot of them from these twin nations of rapine. After the war? In the name of the angels who sing saddened music in heaven as they look down upon music outraged, no more musical instruments from Germany and Austria. Stop it, Mr. Buyer. Stop it for all time. We have the right to expect it of you.

You may well dread to go on reading this, but the straight, plain, horrible truths that have come to us fully verified have been kept out of print long enough. It is high time all our people knew of them.

At Merlant the soldiers of Germany amused themselves as might the arch fiends of Hell. Their last act in the neighboring village of Etre'py was to club to death an old woman eighty-three years of age. That particular group of soldiers seemed to be possessed of an inhuman desire to kill old people. They signalized their arrival in Merlant by tying an old man of seventy to the tail of a horse which they beat into a frenzy of terror before they turned it loose to drag the old man to death.

And the barbed wire of No Man's Land separates us from those soldiers. Over two hundred miles of such entanglements on the western front. Recently the Kaiser's factories put out a new wire containing a lot more carbon than had been previously used in the manufacture of such product. There wasn't a single-handed plier in the American army that would cut it. Word of the improvement came to us in America with samples of the wire our Sammies had obtained with bolt cutters. The problem was put up to twenty-six patriotic plier manufacturers who met in New York with a well-known young army officer. Every manufacturer present threw his patents on the table and said to the others, "Help yourselves." One week later those plier manufacturers met again and brought with them five American made single-handed pliers that cut the German's new wire with ease. The answers are beginning to come in, and those far-flung entanglements are going to be cut just as surely as the ever-increasing forces of Americans are going to be in on the killing. The armies of the Central Powers have passed their meridian. From now on they are going to taste some of the defeats they have inflicted.

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But we were speaking of pliers. Before the war they were selling about two hundred thousand dollars' worth of pliers in the United States each year. Good-bye, business. Those American plier manufacturers who produced the tools to cut Germany's high-carbon wire are going to get what they are entitled to.

And the wire those pliers cut. How about German wire goods? In wire and wire articles they enjoyed about two and three-quarter million dollars' worth of business every year over here. There are wire mills and wire goods factories here at home who are a year or two behind with domestic orders merely because the needs of the Government come first, and Uncle Sam is getting their output.

When our boys break through and sweep over that town of Sommeilles and give its inhabitants the first just goverment they have had since shortly after the war began, what are they going to find? Why, they will again hear verified the story of the two women and four children who took refuge in Mr. Adnot's cellar from which they were dragged. German soldiers raped both these women, assaulted them under most atrocious circumstances. The children shrieked; one had its head cut off and two of the other little chaps had their right hands cut off.

Are we going to cut off their import of German and Austrian wire goods? Are we going to cut off shipments of German-made pliers into this country? Possibly we won't. It may be that we don't' quite understand ourselves, and some perverted power unknown to us will keep up that old business relation, but my candid belief is that a great nation of men and women who won't forget are going to stand right squarely back of the fellow who is too busy to even see a German or Austrian business representative selling these lines. Yes, there's little doubt about it, Mr. Buyer. It's up to you.

A Bavarian soldier writing home from Belgium, said: "I have bayoneted seven women and four young girls in five minutes." Great, brave, heroic representative of his country, wasn't he?

A woman over ninety years of age bayoneted in bed.

At Senlis, France, a civilian tied to a post and bayoneted. His stomach torn open.

At Morelle, a civilian shot for helping a wounded French soldier. Across the street a little lame boy wantonly murdered. It seems endless. There are so many scores of these outrages on record that the overwhelming evidence first sickens and then shocks us to the stern necessity of cleaning this mess up for all time.

Many Americans have motored over quaint, beautiful, picturesque old France and through the busy, thrifty, interesting little Kingdom of Belgium. Many are motoring there now, driving or riding in conveyances branded with the Red Cross, which is respected by all allied armies and disrespected by those hell-hounds of the Central Powers. These motors roll on rubber-tired wheels.

Gives us another thing to think of—rubber—made into hot-water bottles, hose, gloves, tires, and a hundred common items of commerce. Before the war three and a half million dollars of our money found its way to Germany each year to purchase rubber goods. After the war—well, we will ride over those battlefields on more rubber tires to pay our tribute to those brave men who fought and died there. We will visit those towns where Germany and Austria mocked God and shook their mailed fists in the face of civilization. But we won't ride on German-made tires, and here at home "Made in Germany" on a thing of rubber will rob it absolutely of any commercial value. Keep it out. We don't want it now, and we won't want it then. Mr. Buyer, it's up to you.

In a recent speech John Kendrick Bangs said: "I want to tell you what the Hun is doing—tell you what kind of an enemy we are up against at the end of four years. Six weeks ago I held on my knee a little boy who, only seven years old, was playing in a little village that had not been bombarded. Then the Huns dropped bombs from their airplanes and killed some of the old men and women in his town. After they had passed the child was allowed to run out and play. On the road he found a toy—one of those toys we used to get at our children's parties with fancy caps and verses in them. He picked it up—as he was intended to do. He thought it was a toy—as it was intended that he should. Then he tried to break it apart—as it was also intended that he should do. Five hours later, when that little fellow regained consciousness, there was only one finger left on his left hand. All the rest had been blown to pieces."

Is there a man with good red blood in his veins who would not go over to help put such beasts out of existence as could do such a thing as this?

The airplane that carried that vicious toy could hardly be made without the use of aluminum. Other Hun machines built of more aluminum have bombed defenseless cities in England. Still more of them have successfully attacked hospitals and dressing stations. They have been at it for three years and their air raids have been carefully planned, vicious murders. Their victims have been civilians, women, little children, wounded soldiers, doctors and nurses.

Before the war they sold us nearly four million dollars' worth of aluminum and aluminum wares every year.

There's no excuse for that when peace comes to cast a gentle mantle over a world so horribly treated. No, not a bit of it. America has uncovered too much aluminum. American manufacturers have come into their own, and we are going to keep them there.

Some distant day, when the German Crown Prince has taken a German-made aluminum saucepan and baled the Atlantic Ocean down to where the victims of German submarine warfare lie on dry land, we may forget, but until that time no more German or Austrian-made aluminum in any form. And still, Mr. Buyer, it's up to you.

We could go on endlessly, matching each hideous inhuman atrocity with an article on which Germany and Austria enjoyed American business, but it is useless to continue to convince when we are already over-sold on the subject. We could measure miles of dead French, English, Italians, Belgians, Roumanians, Russian, Greek and American soldiers with a German-made tape, and then forever blacklist German-made measuring instruments. The sights seen through periscopes and field glasses have killed their optical glass business. The pictures taken with German-made cameras have killed their lens business. Oh, it's endless. The Germans and Austrians have repeatedly said that business is our god. Let's not argue with them. They aren't worth it. Let's allow them to continue the slander. Yes, the Central Powers may have their own way on that little subject. Our business is just sacred enough so that it will not go to Germany and Austria in the days to come. Price may control some things, but the purchase of goods by Americans from the Central Powers involves a certain thing as well known and as highly regarded in America as it is little known and disregarded in Germany and Austria. That thing is personal honor.

No true American would in any way knowingly impair that sacred thing, nor would he allow his fellow American to be deceived or imposed upon. Guarding this country against the trade impositions and deceptions that are sure to be attempted are keen, intelligent, resourceful, competent men, in whom we have implicit trust. Mr. Buyer, we are glad to put it up to you.

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JOVIANS!

Can You Use Any of These Jobs?

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, are seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau. A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of any of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

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291. Purchasing Agent. Personal correspondence solicited by Chicago electrical concern.

292. Salesmen. Four attractive territories open with large electrical specialty manufacturer.

293. Bookkeeper. Wisconsin electrical jobbing house can use a good, capable man.

294. Secretary. Attractive opening for young man with local electrical contractors' association in large Ohio city; $125 per month.

295. Bookkeeper. Attractive opportunity for man capable of handling an office force and of developing into an executive; good salary.

296. Salesman. Man wanted to sell flashlights in several Western States.

297. Electric Engineers. Large Eastern lamp manufacturer has place for several capable men.

298. Detail Man. $125 per month to office man familiar with pricing and quotations. Good chance for advancement.

299. Stockman. Ohio electrical manufacturer has need of experienced stockkeeper.

300. Salesman. Desk job for man accurate at figures and familiar with detail and correspondence; good future.

301. Linemen. Two men wanted ($85 to $100 per month) who can be advanced to foremen.

302. Chemical Engineer, Mechanical Engineer, Store Keeper } Large steel company is in need of all these classes of employes.

303. Electrician-Lineman. $100 per month to combination man, in Kansas.

304. Shipping Clerk. Experienced man wanted on Pacific Coast; not subject to draft.

305. Wiremen. North Carolina power company can use several; $4 per day and advance as soon as proficiency shown.

306. Linemen. Oklahoma light and power concern wants men familiar with meters, transformers and outside construction work.

307. Salesmen. Three openings; Minnesota, Iowa, South Dakota and Nebraska territory; for men above draft age.

308. Salesmen. Wisconsin public service company needs men to sell gas and electric appliances for newly opened commercial department.

309. Sales Manager. Attractive opening with large Northern electrical concern; first-class man wanted.

310. Salesman. Indiana electrical supply house wants man devoting ether entire or part time to sell desk lamps, decorative fixtures, etc., on commission.

311. Salesman. Good salary to man who is acquainted with motor trade to sell new, second-hand and rebuilt motors in large Southern city. A combination man who can buy as well as sell is desired.

312. Salesmen. Ten specialty men wanted to sell an auto device through North and West.

313. Salesmen. Large Eastern manufacturer of electric motors and welding equipment will pay $150 per month with bonus for several energetic men.

314. Purchasing Agent. Immediate opening for man experienced in the electrical jobbing and manufacturing lines.

315. Draftsman, Estimator, Foreman { Men wanted who are familiar with electric knife switches, switchboards and panel work.

316. Salesman. Attractive opening for man of intelligence, ability, and with some technical knowledge of pole line material and construction.

317. Sales Agent. Indiana fixture manufacturer has territory south of the Ohio and east of the Mississippi Rivers open for good hustler.

318. Telephone Circuit Men. One of the larger universities is looking for instructors in this line for training drafted men; must be exempt from draft.

319. Central Station Engineer. Kansas central power plant has opening; $100 per month.

320. Lamp Salesmen. Eastern manufacturer has several territories open to experienced men.

321. Salesmen. Ohio publicity concern wants outdoor men.

322. Salesmen. Men experienced in calling on jobbers wanted to sell farm lighting plants.

323. Salesmen. Attractive opening with large Eastern electrical manufacturer.

324. Operators. $80 to $115 per month (some positions include house and current) in substations and motor power generating stations; Western concern.

325. Lineman, Acetylene Welder { Oklahoma power concern has place for such men.

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EMPLOYERS
CAN YOU USE ANY OF THESE MEN?

Do You Need

AN EXECUTIVE, SALESMAN, SUPERINTENDENT, ENGINEER OR OTHER EMPLOYE?

WE PUBLISH below a list of more than 100 applications now on file with our Employment Bureau, giving the number under each classification and a limited statement of the specifications. Among these you will surely find the man to fill the place you have open. Let us know your requirements, and we will take pleasure in putting the applicants in touch with you promptly. Address The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

CLASSIFICATION	No. on File	Age	Qualifications	Experience	Salary Wanted	Location
Advertising Managers	3	23–29	H. S.-College	2–8 yrs.	$150–250	Anywhere
Bookkeepers	2	26–35	High School	5–14 yrs.	$65–100	Anywhere
Central Station Managers	3	29–38	H. S.-Univ	6–18 yrs.	$60–200	Anywhere
Clerical	3	22–24	High School	2–10 yrs.	$75–125	Anywhere
Commercial Laboratory Workers	1	29	Tech. School	11 yrs.	.....	Anywhere
Construction Engineers	3	28–46	H. S.-Univ	2–27 yrs.	$100–200	Anywhere
Electricians	1	30	H. S.-Univ	3 yrs.	$100	Anywhere
Electrical Engineers	5	30–38	Practical-Univ.	5–12 yrs.	$125–300	Anywhere
Engineers	5	28–40	Practical-Univ.	5–12 yrs.	$125–300	Anywhere
Estimators	3	28–36	Practical	9–18 yrs.	$125–160	Anywhere
Foremen	2	27–34	Practical	9–16 yrs.	$125–160	Anywhere
General Managers	3	31–38	Practical	7–15 yrs.	$250–417	Anywhere
Linemen	1	22	High School	5 yrs.	$90	Anywhere
Managers, Commercial Department	2	34–35	Practical	12 yrs.	$250	Anywhere
Managers, Contracting	2	26–36	College	5–16 yrs.	$125	Anywhere
Managers, Jobbing House	2	32	College	13 yrs.	$2,400-10,000	Anywhere
Managers, Office	3	26–34	High School	8–10 yrs.	$100–250	Anywhere
Managers, Plant	11	30–47	Practical-Univ.	10–20 yrs.	$100–250	Anywhere
Managers, Traffic	1	53	Practical	15 yrs.	$200	Anywhere
Manufacturers' Representatives	4	36–38	Practical-Tech.	8–10 yrs.	Com.–$200	Anywhere
New Business Managers	2	29–34	H. S.-Univ.	9–15 yrs.	$125–175	Anywhere
Office Executives	2	25–32	Grade-Univ.	4–18 yrs.	$85–150	Anywhere
Power Salesmen	1	36	Tech. Grad	12 yrs.	$200	Anywhere
Purchasing Agent	6	24–41	Grade-Tech	4–21 yrs.	$125–200	Anywhere
Sales Engineers	3	39–45	College–Univ.	9–20 yrs.	$100–200	Anywhere
Sales Managers	6	28–41	H. S.-Univ.	4–17 yrs.	$150–300	Anywhere
Salesmen	27	24–43	H. S.-Univ.	2–25 yrs.	$75–300	Anywhere
Superintendents	10	28–44	H. S.-Univ.	3–15 yrs.	$125–300	Anywhere
Telephone Engineers	1	35	H. S.-Tech.	15 yrs.	$200	Anywhere
Welder (Acetylene)	1	33	High School	5 yrs.	$150	Anywhere
Wiremen	2	23–25	High School	7–9 yrs.	$75–125	Anywhere

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STATESMEN-AT-LARGE

BISCHOFF, W. E., Po. 3190, care W. N. Matthews & Bro.....Chicago, Ill.
CARPENTER, JOHN, Po. 1320, care Corsicana Gas & Electric Co..Corsicana, Tex.
CHASE, SAMUEL A., Po. 4424, care Westinghouse Electric & Manufacturing Co.....East Pittsburgh, Pa.
CRONINGER, C. R., Po. 9624-60V, care General Electric Co.....St. Louis, Mo.
DALY, DAVID, Po. 366-V, care Houston Electric Co.....Houston, Tex.
DOWNS, B. M., Po. 2508, care Hemingway Glass Co.....Covington, Ky.
ELKAS, I., Po. 9931, care Robbins & Myers.....St. Louis, Mo.
GUARDIA, A. A., Po. 2657, 4447 Magnolia Ave.....Chicago, Ill.
HAND, WILLIAM, Po. 796, care General Electric Co.....Kansas City, Mo.
HAWKINS, R. V., Po. 11619, care Appleton Electric Company.....St. Louis, Mo.
HEAD, W. B., Po. 139-108, care Texas Power & Light Co.....Dallas, Tex.
HERSTEIN, W. R., Po. 765V, care Electric Supply Co.....Memphis, Tenn.
HICKOX, NORMAN B., Po. 7881, care National X-Ray Reflector Co., 235 West Jackson Blvd.....Chicago, Ill.
HILL, G. W., Po. 1271, 29 West Thirty-Ninth St.....New York, N.
HOLCOMBE, W. P., Po. 901V, care Builders Exchange.....Minneapolis, Mi
JENNINGS, O. A., Po. 226, care Southwest General Electric Co.....Dallas, T
LAUDERBACH, F. E., Po. 11655, 917 Pine St.....St. Louis, M
LEWIS, P. LLOYD, Po. 6018V, care Wagoner Electric Company.Kansas City, M
MARTIN, CHARLES L., Po. 176-56V, care Electric Specialty Co.....Dallas, Tex
RAMIER, J. F., Po. 10604, care Memphis Cons. Gas & Electric Co. Memphis, Tenn
SERVA, A. A., Po. 425, 2420 Hoagland Ave.....Ft. Wayne, In
TUTTLE, W. B., Po. 1031, care San Antonio Traction Co.....San Antonio, Tex
VOGAN, W. G., Po. 15974, care Northern Electric Co.....Winnipeg, Man
VOGEL, J. C., Po. 2254-32V, Fifty-Ninth and Woodland Ave...Philadelphia, Pa
WADDINGTON, E. H., Po. 5176, care Western Electric Co.....St. Louis, M
WAKEMAN, J. M., Po. 524, 29 West Thirty-Ninth St.....New York, N. Y
WILCOX, E. A., Po. 6830V, 1819 Eye St.....Washington, D. C

JOVIAN STATESMEN

ALABAMA
MATTHEWS, H. W., Po. 4476, care Burgoon-Matthews Electric Co..Birmingham

ARIZONA, CALIFORNIA, NEVADA
SPERRY, LEWIS E., Po. 9415, care New York Insulated Wire Co...San Francisco

ARKANSAS
GRIFFITH, C. J., Po. 13901, care Little Rock Railway & Electric Co..Little Rock

CONNECTICUT
HOLMES, T. L., Po. 3046, care Western Electric Co.....West Haven

GEORGIA
COLLIER, RAWSON, Po. 4458, care Georgia Railway & Power Co.....Atlanta

IDAHO
KIERSTED, EARNEST C., Po. 10258, care Idaho Power Co.....Twin Falls

ILLINOIS
SPAKE, L. C., Po. 15397V, care Western Editor McGraw-Hill Publishing Co.....Chicago

INDIANA
LEE, WALLACE O., Po. 11440, care Indianapolis Light, Heat & Power Co.....Indianapolis

KENTUCKY
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville

LOUISIANA
PORTEOUS, W. A., Po. 9226, care Western Union Telegraph Co.....New Orleans

MASSACHUSETTS
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston

MICHIGAN
CAVANAUGH, J. A., Po. 11199, care Benton Harbor & St. Joe Ry. Co. Benton Harbor

MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA
VILETT, W. H., Po. 3675V, care Sterling Electric Co.....Minneapolis

MISSOURI
JOHNSON, FRED, Po. 177V, care Wagner Electric Manufacturing Co.....St. Louis

NEBRASKA
ZIMMAN, I. B., Po. 1411, care Omaha Electric Light & Power Co.....Omaha

NEW HAMPSHIRE
BURLEIGH, C. B., Po. 398, care General Electric.....Boston, Mass.

NEW JERSEY, DELAWARE
HOWLETT, C. A. S., Po. 279.....Elizabeth

NEW MEXICO
SHEPARD, J. A., Po. 16106, care Deming Ice & Electric Co.....Deming

NEW YORK
HINES, E. G., Po. 16222, care Electrical World, 239 West Thirty-Ninth St.....New York

OHIO
P. B. ZIMMERMAN, Po. 7305V, care National Electric Lamp Association. Nela Park.....Cleveland

OKLAHOMA
MCCALLUM, CHARLES, Po. 3394, care Western Electric Co.....Oklahoma City

PENNSYLVANIA
CRISS, GEO. H., Po. 3364.....Pittsburgh

RHODE ISLAND
DAVENPORT, E. R., Po. 8019, care Naragansett Electric Light Co....Providence

SOUTH CAROLINA
FULLER, W. W., Po. 16462, care Isle of Palms Traction Co.....Charleston

TENNESSEE
WATSON, C. J. R., Po. 2131V, care Electric Supply Co.....Memphis

TEXAS
CLARK, HIRAM O., 6629, care Houston Lighting & Power Co.....Houston

UTAH
TALMADGE, CHARLES H., Po. 1431, care Western Electric Co.....Salt Lake City

VERMONT
LARRABEE, E. E., Po. 1145, care Twin States Gas & Electric Co.....Bennington

VIRGINIA
SEILER, GUY E., 7479, care Virginia Railway & Power Co.....Richmond

WEST VIRGINIA
POWERS, W. R., Po. 2784, care Consolidated Heat, Light & Power Co..Huntington

WISCONSIN
GOLIN, CARL, Po. 12385V, care Northwestern Storage Battery Co....Milwaukee

PROVINCE OF ALBERTA
RICHARDS, NORMAN S., Po. 8985, care Northern Electric Co.....Calgary

PROVINCE OF MANITOBA
SCHUMACHER, J. H., Po. 1742, care Schumacher-Gray Co., Ltd.....Winnipeg

PROVINCE OF QUEBEC
HYDE, E. N., Po. 1614, care Northern Electric & Manufacturing Co...Montreal

FIRST AND SECOND TRIBUNES

ALABAMA
MATTHEWS, H. W., Po. 4476, First Tribune, care Burgoon-Matthews Electric Co.....Birmingham

ARIZONA
*HOWLAND, JOHN, Po. 18686, First Tribune, care Globe Light & Power Co...Globe

ARKANSAS
RUSH, J. C., Po. 1556V, First Tribune, care Rush Bros.....Hot Springs
(*Nicholas Lund, Po. 17257, Second Tribune)

CALIFORNIA
*FAGG, J. H., Po. 12212, First Tribune, care Pacific Gas & Electric Co. .Stockton
(*A. F. Flanagan, Po. 12213, Second Tribune)
GOULD, T. A., Po. 18057, First Tribune, care Redondo Home Telephone Co.....Redondo Beach
*LANDIS, H. G., Po. 288, First Tribune, care Landis Electric Co., 941 8th St.....San Diego
(*H. B. Steventon, Po. 14643, Second Tribune)
(Henry Mellman, Po. 9392, Second Tribune).....Oakland
*NIGHTINGALE, E. L., Po. 18072, First Tribune, care General Electric Co., 724 Spring St.....Los Angeles
(F. J. Airey, Po. 1266, Second Tribune)
*ROWE, A. E., Po. 995, First Tribune, care Telephone Electric Co..San Francisco
*(Edwin R. Brown, Po. 7715, Second Tribune)
*TOBEY, J. O., Po. 12226, First Tribune, care Pacific Gas & Electric Co. Sacramento
(*H. F. Schultz, Po. 14914, Second Tribune)

COLORADO
*BURNITE, T. B., Po. 3426V, First Tribune, Boston Bldg.....Denver
(*H. S. Sands, Po. 1708, Second Tribune)
PAUL, CLARENCE M., Po. 4942, First Tribune, care Trinidad Gas & Electric Supply Co.....Trinidad

DELAWARE
*SHELTON, H. E., Po. 14400, First Tribune, care Wilmington & Philadelphia Traction Co.....Wilmington

DISTRICT OF COLUMBIA
*CARROLL, H. R., Po. 1794, First Tribune, 714 Twelfth St.....Washington

GEORGIA
(Geo. E. Watts, Po. 12482, Second Tribune).....Atlanta

IDAHO
DOVERY, C. G., Po. 10241, First Tribune, care Idaho Power Co.....Twin Falls
(J. O. Blackstone, Po. 15318, Second Tribune)

ILLINOIS
BAUM, B. E., Po. 19260, First Tribune, care Vermillion County Telephone Co.....Danville
BROWN, EDWIN C., Po. 5278, First Tribune, care Galva Electric Light Co...Galva
(Chas. E. Broderick, Po. 1154, Second Tribune).....East St. Louis
GREEN, WM. A., Po. 13279, care Green Electric Co., 315 South Jefferson St..Peoria
(Jas. R. Downs, Po. 13277, Second Tribune)
KETTRON, C. W., Po. 16416, First Tribune, President, Illinois Elect. Porc. Co.....Macomb
(James R. Massey, Po. 8939, Second Tribune).....Springfield
MORSE, CHESTER A., Po. 14611, First Tribune, care Central Public Illinois Service Co.....Mattoon
(Donald R. Truax, Po. 14617, Second Tribune)
*NELSON, A. L., Po. 15384, First Tribune, care Commonwealth Edison Co. Chicago
(*W. H. Colman, Po. 3040V, Second Tribune)

INDIANA
HARRIS, A. B., Po. 14154, First Tribune, 570 Washington St.....Gary
*LOUTH, M. E., Po. 16419, First Tribune, care Globe Stove & Range Co. Kokomo
*VICTOR, H. R., Po. 4857, First Tribune, care Varney Electrical Supply Co., 235 South Meridian St.....Indianapolis

IOWA
*ABELL, C. S., Po. 3952V, First Tribune, 419 Main St.....Keokuk
FLACK, FRANK W., Po. 13979, First Tribune, care Iowa Ry. & Light Co.....Coon Rapids
MCINNERNEY, B., Po. 1400, First Tribune, care Kimball Bros. & Co. Council Bluffs
(E. S. Damon, Po. 1398, Second Tribune)
MURPHY, J. E., Po. 15800, First Tribune, care Murphy-Dunham Co., Sioux City

KANSAS
*CARR, J. E., Po. 16506, First Tribune, 446 S. 7th St.....Salina
(*M. L. Derge, Po. 9616, Second Tribune)
HUBBARD, HARVEY B., Po. 17623, First Tribune, care Hubbard Electric Co.....Beloit
*MAGRUDER, H. W., Po. 15816, First Tribune, care Liberal Light, Ice & Power Co.....Liberal
*WADSWORTH, W. A., Po. 7249, First Tribune, care Kansas Gas & Electric Company.....Wichita
*WRIGHT, E. A., Po. 15827, First Tribune, care Great Bend Water & Electric Co.....Great Bend

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KENTUCKY

ADAMS, F. C., Po. 18315, First Tribune, proprietor, Adams Electric Co..Sulphur
BERRY, D. EARLE, Po. 8245, First Tribune, care Ruby House.....Owensboro
(C. C. Childers, Po. 15494, Second Tribune).....Louisville

LOUISIANA

JOUBERT, W. C., Po. 16467, First Tribune, 409 Main St.....Baton Rouge
LEVY, FERDINAND, Po. 6696, First Tribune, care Interstate Electric Co.....New Orleans
(*T. N. Lide, Po. 3925, Second Tribune)
SWANN, L. A., Po. 2730-100, First Tribune, care Lake Charles Railway & Light Company.....Lake Charles
(*J. A. Landry, Po. 127, Second Tribune)
WILLIAMS, J. A., Po. 5053, First Tribune, care Southwest Gas & Electric Co.....Shreveport
(H. E. Cahn, Po. 13025, Second Tribune)

MARYLAND

(Stanley B. Prather, Po. 1650, Second Tribune).....Baltimore

MASSACHUSETTS

(Kurt R. Sternberg, Po. 7612, Second Tribune).....Springfield

MICHIGAN

*AVIS, C. J., Po. 10086, First Tribune, care Southern Michigan Light & Power Co.....Morenci
*BURCHARD, C. A., Po. 19049, First Tribune, care B. H. & St. Joe Ry. & Light Co.....Benton Harbor
(*Earl Frakes, Po. 15528, Second Tribune)
*CUDAHY, J. D., Po. 16321, First Tribune, care Consumers Power Co. Kalamazoo
(*L. W. Brown, Po. 16319, Second Tribune)
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St.....Traverse City
McCLOY, A. S., Po. 11051, First Tribune, care Stevenson Hotel.....Detroit
(*J. T. Pearson, Po. 11210, Second Tribune)
*MARBLE, CHARLES M., Po. 13961, First Tribune, 67 College St.....Battle Creek
(*L. R. Greusel, Po. 10918, Second Tribune)
SCHAGANE, P. F., Po. 13871, First Tribune, 617 South Saginaw St.....Flint
(L. G. Copeman, Po. 7219, Second Tribune)
*THORNE, JOHN J., Po. 14749, First Tribune, care Thorne Electric Co...Bay City
(*Samuel Ball, Po. 19542, Second Tribune)
*TROMBLEY, GEORGE, Po. 14750, First Tribune, care Trombley Electric Co., 130 N. Jefferson St.....Saginaw
(*A. B. Brow, Po. 14737, Second Tribune, 228 South Weadock Ave.)...Saginaw
WATSON, GEO. H., Po. 12848, First Tribune, care Consumers Power Co., 124 Monroe St.....Grand Rapids
(R. H. Vandermass, Po. 16484, Second Tribune)

MINNESOTA

ANDERSON, EMIL, Po. 7805, First Tribune, 239 Plymouth Building. Minneapolis
(*Paul Joyslin, Po. 1254, Second Tribune)
GRIMES, W. A., Po. 761, First Tribune, care Northern Electric Co.....Duluth
(*F. A. Johnson, Po. 8192, Second Tribune)

MISSISSIPPI

*BRANDLI, H. E., 15617, First Tribune, care Meridian Light & Power Co.....Meridian
(*Chas. M. Rogers, Po. 14485, Second Tribune)
GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co.....Gulfport
*MCANGE, W. N., Po. 16854, First Tribune, care Southern Telephone & Telegraph Co., Telephone Building.....Corinth
NEWBILL, HOMER J., Po. 16855, First Tribune, Box 413.....Tupelo

MISSOURI

*BARBER, A. D., Po. 1850, First Tribune, care Western Electric Co..Kansas City
*BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co.....Marshall
(G. E. Michel, Po. 9061, Second Tribune).....St. Louis
FOX, CHAS. D., Po. 18163V, First Tribune, care City Light Plant.....St. Joseph
(S. W. Beale, Po. 6840, Second Tribune)
(A. M. Grall, Po. 4112, Second Tribune).....Joplin
*NIENHAUS, J. V., Po. 19219, First Tribune, care Perry County Public Utilities Co.....Perryville
*WALKER, A. H., Po. 17669, First Tribune, care Walker-O'Byrne Electric Co.....Springfield

NEBRASKA

BURLEY, W. B., Po. 10291, First Tribune, 318½ West Koenig St...Grand Island
(J. D. Whitmore, Po. 1409, Second Tribune)

NEW JERSEY

ALEXANDER, JOHN P., Po. 11892, First Tribune, Broad St. Bank Bldg...Trenton
COX, W. A., Po. 18960, First Tribune, care Public Service Electric Co...Newark
FEY, W. E., Po. 10120, First Tribune, care Diehl Manufacturing Co...Elizabeth
*PURINTON, A. J., Po. 9643V, First Tribune, care Atlantic City & Shore Ry. Co.....Atlantic City
(*Wm. Bach, Po. 14191, Second Tribune)
STORTZ, H. W., Po. 16450, First Tribune, care Edison Storage Battery Co. Orange
(J. B. Renwick, Po. 16445, Second Tribune)

NEW MEXICO

*HICKS, A. C., Po. 17978, First Tribune, care Albuquerque Gas & Electric Co.....Albuquerque
*ROBERTS, E. A., Po. 17980, First Tribune, care Public Utilities Co.....Carlsbad
SMITH, JAMES R., Po. 16107, First Tribune, care Raton Electric Light & Power Co.....Raton

NEW YORK

(C. C. MacKenzie, Po. 2029, Second Tribune).....Syracuse
BURNS, JOHN H., Po. 870, First Tribune, care McCarthy Bros. & Ford, 41 Eagle St.....Buffalo
(L. F. Philo, Po. 774, Second Tribune)
*PELZ, GEO. V. W., Po. 18674, First Tribune, care New York Telephone Co., 109 West 125th St.....New York
(*W. J. Moore, Po. 3136, Second Tribune)
*RUSSELL, R. E., Po. 5561, First Tribune, care General Electric Co..Schenectady

NORTH CAROLINA

JONES, WM. T., Po. 5685, First Tribune, P. O. Box 405.....Fayetteville
SPEAKE, CHAS. L., Po. 16993, First Tribune, care Westinghouse Electric & Manufacturing Co.....Charlotte
*SPENCER, G. L., Po. 11366, First Tribune, 713 Chestnut St.....Greensboro
(*R. H. Milton, Po. 11371, Second Tribune)

OHIO

*ALLIS, CLARENCE L., Po. 13203, First Tribune, care Wooster Electric Co. Wooster
BRAUN, W. A., Po. 14652, First Tribune, care Braun Electric Manufacturing Co.....Dover
*BULKELEY, W. V. C., Po. 17998, First Tribune, care Columbus Railway, Power & Light Co.....Columbus
*COCHRAN, J. E., Po. 15898, First Tribune, care Ohio Electric Co.....Lima
*COONEY, JAS. J., Po. 13184, First Tribune, care Toledo Railway & Light Co.....Toledo
(*Alonzo W. Roush, Po. 12410, Second Tribune)
CRAIN, CHARLES E., Po. 6946, First Tribune, care Crain-Stuart Co. . Springfield
(Fred J. Green, Po. 6951, Second Tribune)
*DUNNING, R. S., Po. 16471, First Tribune, care Forest City Rubber Co. Cleveland
*FENTON, E. BURT, Po. 18446, First Tribune, care Northern Ohio Traction & Light Co.....Akron
(*A. P. Regal, Po. 19064, Second Tribune)
*FOX, HORACE C., Po. 16361, First Tribune, care Massillon Gas & Electric Co.....Massillon
HENCH, L. W., Po. 7854, First Tribune, care Westinghouse Electric & Manufacturing Co.....Youngstown
(E. A. Sanders, Po. 9666, Second Tribune)
HURD, WILLIAM P., Po. 9798, First Tribune, care Northwestern Ohio Light Co.....Van Wert
(*Samuel E. Ringgold, Po. 10995, Second Tribune)
LOEWE, P. M., Po. 3942, First Tribune, care Oberlin Gas & Electric Co..Oberlin
MILLER, E. G., Po. 13108, First Tribune, care Warren & Niles Telephone Co.....Warren
(Marshall, W. J., Po. 10001, Second Tribune)
PARKER, HERBERT L., Po. 905, First Tribune, care Conneaut Metal Works Co.....Conneaut
*ROHRBAUGH, C. L., Po. 18450, First Tribune, 1211 Carr St.....Sandusky
(*R. C. Beebe, Po. 18442, Second Tribune)
*SELLS, J. F., Po. 8979, First Tribune, care Mansfield Electric Light & Power Co.....Mansfield
SIMS, E. A., Po. 5968V, First Tribune, care Avery-Loeb Electric Co.....Newark
(F. C. Morrison, Po. 18630, Second Tribune)
SMITH, E. B., Po. 10596, First Tribune, care Coshocton Gas Co.....Coshocton
VAN WINKLE, FRANK D., Po. 12966, First Tribune, care Post Glover Co.....Cincinnati
(*L. E. Trotter, Po. 3510, Second Tribune)

OKLAHOMA

*CORKEN, O. K., Po. 19827, First Tribune, 213 W. First St.....Oklahoma City
HOWELL, EDWARD, Po. 7896, First Tribune, care Abernathy & Howell, Elks Building.....Shawnee
*RENTCHLER, C. E., Po. 6870, First Tribune, care Enid Electric & Gas Co....Enid
(*Lincoln Beerbower, Po. 1475, Second Tribune)
*STRASSWEG, FRED A., Po. 19821, First Tribune, care Muskogee Gas & Electric Co.....Muskogee
(*Edgar M. Graham, Po. 19811, Second Tribune)
*WALKER, P. G., Po. 6871, First Tribune, care Tulsa Corporation.....Tulsa
(James M. Kinslow, Po. 16770, Second Tribune)

PENNSYLVANIA

*FADER, W. L., Po. 2883, First Tribune, care Union Electric Co.....Pittsburgh
(*D. Paul Lockard, Po. 5788, Second Tribune)
FERREE, L. L., Po. 18865, First Tribune, 1830 Regina St.....Harrisburg
KRISE, W. M., Po. 4823, First Tribune, Manager, Jefferson Electric Co.....Punxutawney
LODGE, JOS., Po. 18869, First Tribune, 157 East Chestnut St.....Lancaster
MURPHY, WALTER R., Po. 14021, First Tribune, care Meadville Telephone Co.....Meadville
(Carl W. Wilks, Po. 10848, Second Tribune)
(W. T. Snyder, Po. 5128, Second Tribune).....McKeesport
REGER, THOMAS E., Po. 4637, First Tribune, 224 Seventh Ave.....Altoona
*ROUNDS, L. B., Po. 14528, First Tribune, care New Castle Electric Co., 19 Washington St.....New Castle
(*J. C. Chestnut, Po. 14873, Second Tribune)

SOUTH CAROLINA

DOUGLAS, JAS. A., Po. 16984, First Tribune, care Municipal Electric Plant.....Lake City
(T. A. Brookbanks, Po. 16460, Second Tribune).....Charleston

TENNESSEE

ALLEN, TERRY E., Po. 18838, First Tribune, P. O. Box 185.....Jackson
*JONES, GRAYSON, Po. 13782, First Tribune, care Electric Equipment Co., 131 Eighth Ave., North.....Nashville
RUTLEDGE, C. B., Po. 2127, First Tribune, care Bluff City Electric Co..Memphis
(B. F. Myers, Po. 12911, Second Tribune)

TEXAS

*IRVINE, R. J., Po. 6251, First Tribune, care San Angelo Water, Light & Power Co.....San Angelo
*COOPER, H. S., Po. 365, First Tribune, care Southwest Gas & Electric Co., 405 Slaughter Building.....Dallas
COPLEY, E. F., Po. 7073, First Tribune, care Central Electric Co.....Waco
(L. B. Gardner, Po. 11390, Second Tribune)
*FROST, F. G., Po. 4015V, First Tribune, care Houston Lt. & Pr. Co.....Houston
*KELSEY, L. M., Po. 11350, First Tribune, care S. W. Tel. & Tel. Co...Galveston
(*Wooten, J. H., Po. 20357, Second Tribune)
LARABEE, R. W., Po. 1327, First Tribune, care Southwestern Electric & Machine Co.....El Paso
*MILLER, THOS. L., Po. 8766, First Tribune, 219 Poplar St.....Abilene
MONTGOMERY, JOHN G., Po. 11355, First Tribune.....La Marque
MUNROE, WALTER N., Po. 3085, First Tribune, care Texas Power & Light Co.....Paris
REID, BRUCE, Po. 18290, First Tribune, care Gulf Refining Co.....Port Arthur
(Edward T. Keck, Po. 18284, Second Tribune)
*SCOVILL, F. E., Po. 17, First Tribune, care San Antonio Builders Exch. San Antonio
(*C. G. Matthews, Po. 10662, Second Tribune)
SMITH, GEO. B., Po. 6649, First Tribune, 309 Guadalupe St.....San Marcos — Central Texas League — Lockhart, Luling, Seguin, New Braunfels, San Marcos

VIRGINIA

*LANCASTER, WM., Po. 6594, First Tribune, care Western Electric Co..Richmond
(*Peter Winston, Po. 1546, Second Tribune)
*MACLEARY, H. M., Po. 9725, First Tribune, 707 Washington St.....Suffolk
(*J. E. B. Holliday, Po. 17106, Second Tribune)

*Patrick, W. A., Po. 19859, First Tribune, care Dupont-DeNemours & Co.....Hopewell
(*G. C. Hurst, Po. 8931, Second Tribune)
Woodhouse, H. C., Po. 6618, First Tribune, 54 Bank St.....Norfolk

WASHINGTON

(H. B. Pierce, Po. 7235, Second Tribune).....Spokane

WEST VIRGINIA

Costine, Thos. E., Po. 7699, First Tribune, 1059 McColloch St.....Wheeling
(R. R. Fagin, Po. 9161, Second Tribune)
*Walker, C. D., Po. 18092, First Tribune, care C. & W. Electric Co. Huntington

WISCONSIN

*Briggs, Wilfred, Po. 12382, First Tribune, 18 Portland St.....Fond du Lac
(*John Adams, Po. 12378, Second Tribune)
Dearth, E. C., Po. 17144V, First Tribune, care Wisconsin & Minnesota Light & Power Co.....Eau Claire
(Holmes Ives, Po. 18253, Second Tribune)
*Dunham, A. W., Po. 7352, First Tribune, care Sun Ray Manufacturing Co.....Oskhosh
*Douglas, I. R., Po. 18360, First Tribune, care of the Michigan Appliance Co.....Milwaukee
(*A. L. Engle, Po. 18991, Second Tribune)
*Engsberg, B. C., Po. 15985, First Tribune, care Light and Water Department.....Lake Mills
Linker, P. R., Po. 14302, First Tribune, care Wisconsin-Minnesota Light & Power Co.....La Crosse
(Dan Whalen, Po. 16022, Second Tribune)
Tessier, Leonard L., Po. 18823, care De Pere Electric Light & Power Co. De Pere
Wickler, W. O., Po. 20000, First Tribune, care Wisconsin Gas & Electric Co.....Watertown

CANADA

ALBERTA

(David Conn, Po. 11885, Second Tribune).....Lethbridge

MANITOBA

*Henry, J. S., Po. 5994, First Tribune, 152 Gary St.....Winnipeg
(*G. J. Brown, Po. 5977, Second Tribune)

ONTARIO

*Bradley, J. M., Po. 13203, First Tribune.....Iroquois Falls
(C. B. Deeks, Po. 17101, Second Tribune).....Coniston
Cooke, W. P., Po. 16714, First Tribune, P. O. Box 178.....Port Arthur

SASKATCHEWAN

Sangster, A. G., Po. 7496, First Tribune, 820 Fourteenth St., East...Saskatoon

SPAIN

Eddy, H. W., 11105, First Tribune, care Riegos y Fuerza del Ebro S. A. Apartado 491.....Barcelona

* * * *

JOVIAN HOTELS

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Baltimore, Md.—Emerson	$2.00	$2.50
Boise, Ida.—Idanha	$1.00	$1.50
Boston, Mass.—Brunswick	.....	.....
Charlotte, N. C.—Buford	$1.00	$1.50
Chattanooga, Tenn.—Theresa	.....	.....
Colorado Springs, Colo.—Acacia	.....	.....
Columbia, S. C.—Colonial	.....	.....
Dallas, Tex.—Oriental	$1.50	.....
Denver, Colo.—Albany	$1.00	$1.50
Des Moines, Ia.—Kirkwood	.....	.....
Detroit Mich.—Hotel Tuller	.....	.....
Dixon Ill.—Dixon Inn	$1.00	.....
Dumright, Okla.—Hotel Roberts	$1.00	$1.50
Edmonton, Alta.—Alberta	.....	.....
Eau Claire, Wis.—Eau Claire	.....	.....
Ft. Wayne, Ind.—Wayne	$1.00	.....
Ft. Worth, Tex.—Metropolitan	.....	.....
Gary, Ind.—Gary	$1.00	$1.50
Grand Rapids, Mich.—Livingston	$1.00	.....
Harrisburg, Pa.—Columbus	.....	.....
Houston, Tex.—Bender	$1.50	$2.00
Hutchinson, Kans.—Chalmers	.....	.....
Idaho Falls, Ida.—Eleanore	$1.00	$2.00
Jackson, Miss.—Royal	.....	.....
Jacksonville, Fla.—Mason	.....	.....
Jacksonville, Ill.—Pacific	.....	.....
Kalispell, Mont.—Kalispell	$1.00	.....
Kansas City, Mo.—Coates	$1.00	$1.50
Lethbridge, Alta.—Alexandria	$1.00	.....
Los Angeles, Cal.—Clark / New Rosylin	$1.00	$1.50
Louisville, Ky.—Galt	.....	.....
Madison, Wis.—Capital	$1.00	.....
Milwaukee, Wis.—Charlotte	$1.00	.....
Mitchell, S. D.—New Navin	.....	.....
Montgomery, Ala.—Exchange	.....	.....
Montreal, P. Q.—St. Lawrence Hall / Windsor	.....	.....
Muskegon, Mich.—Muskegon	$1.00	$1.5
New Orleans, La.—De Soto	$1.00	.....
New York, N. Y.—Breslin	.....	.....
Niagara Falls, N. Y.—Prospect	.....	.....
Norfolk, Va.—Southland	$1.00	$1.5
Oshkosh, Wis.—Tremont	.....	.....
Peoria, Ill.—Mecca	$1.00	.....
Philadelphia, Pa.—New Bingham	$1.50	$2.5
Pittsfield, Mass.—Wendell	$1.50	.....
Portland, Ore.—Multnomah / Oregon	$1.50 / $1.00	$2.0
Richmond, Va.—Jefferson / Richmond	$1.50 / $1.50	$2.5 / $2.5
Roanoke, Va.—Rockledge	$1.00	.....
Rochester, N. Y.—Powers	.....	$2.0
Rutland, Vt.—Berwick	.....	.....
St. Joseph, Mo.—St. Francis	.....	.....
St. Louis, Mo.—American	$1.50	.....
Salt Lake City, Utah—Newhouse	.....	.....
San Angelo, Tex.—Landon	.....	.....
San Diego, Cal.—San Diego	$1.00	.....
San Francisco, Cal.—Argonaut / Sutter	$1.00 / $1.50	$2.0
Santa Barbara, Cal.—Potter	.....	.....
Schenectady, N. Y.—Mohawk	$1.00	$2.0
Seattle, Wash.—Seattle	$1.00	$2.0
Sheridan, Wyo.—Sheridan	.....	.....
Spokane, Wash.—Spokane	.....	.....
Springfield, Mo.—Colonial	.....	.....
Tacoma, Wash.—Olympus	.....	.....
Three Rivers, Mich.—Three Rivers	$2.00	.....
Tucson, Ariz.—Heidel	.....	.....
Vicksburg, Miss.—Carroll	$1.00	.....
Waco, Tex.—New State	$1.00	$2.0
Watertown, S. D.—Kampeska	$1.00	.....
Watertown, Wis.—New Commercial	$1.00	$1.50
Winnipeg, Man.—St. Regis	$1.50	.....
Winona, Minn.—Winona	.....	.....

CHARTERED JOVIAN LEAGUES

Cincinnati	Charter	No. 1
Kansas City, Mo.	"	No. 2
Pittsburgh	"	No. 3
Minneapolis	"	No. 4
St. Joseph, Mo.	"	No. 5
Louisville, Ky	"	No. 6
Stark County Jovian League (Comprising the towns of Massillon, Canton and Alliance, Ohio.)	"	No. 7
Tulsa, Okla	"	No. 8
Eau Claire, Wis.	"	No. 9
Harrisburg Pa.	"	No. 10
Wichita, Kan.	"	No. 11
Winnipeg, Man.	"	No. 12
Bay City, Mich.	"	No. 13
Milwaukee, Wis.	"	No. 14
Port Arthur, and Fort William, Ont.	"	No. 15
Oklahoma City	"	No. 16
Galveston, Texas	"	No. 17
Muskogee, Okla.	"	No. 18
Mansfield, Ohio (Comprising Richland and Ashland Counties.)	"	No. 19
St. Louis	"	No. 20
Southwestern Michigan Jovian League (Benton Harbor, Michigan.)	"	No. 21
Watertown (Wis.) Jovian League	"	No. 22
Akron (Ohio) Jovian League	"	No. 23
Wilmington (Del.) Jovian League	"	No. 24
Dallas Jovian League	"	No. 25
Columbus Jovian League	"	No. 26
Denver Jovian League	"	No. 27
New York Jovian League	"	No. 28
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Atlantic City Jovian League	"	No. 31
Globe Jovian League	"	No. 32
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JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, V. W. Shear, Po. 14399, 323 Ohio Building.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, R. J. Hadlow, Po. 15530, care Electric Service Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, Edmond D. McCarthy, Po. 589-10, 41 East Eagle Street.

CHATTANOOGA—Wednesday, 12:00 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge, 1900 Continental & Commercial Bank Building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, Joseph C. Bowman, Po. 6275, care H. W. Johns-Manville Company.

CLEVELAND—Regular meeting, Thursday, 12:00 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, Lucille J. Darrah. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12:00 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Railway, Power & Light Company.

DALLAS—First and third Mondays, Hotel Adolphus, 12:15 p. m. Secretary, H. S. Cooper, Po. 365, Slaughter Building.

DAYTON—First and third Mondays of each month, 12:00 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Company.

DENVER—Second and fourth Wednesdays, 12:15 p. m., Kenmark Hotel. Secretary, T. B. Burnite, Po. 3426V, 523 Boston Building.

EAU CLAIRE—First Monday each month. Secretary, E. C. Dearth, Po. 17144V, care Wisconsin & Minnesota Light & Power Company.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna Street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur Hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Company.

GALVESTON—Luncheon meeting fourth Tuesday each month. Secretary, F. G. Cassara, Po. 20343, care Southwestern Telephone and Telegraph Company.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Company.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Company.

HOUSTON (TEX.)—Date later. Rice Hotel. Secretary, R. S. Daunoy, Po. 20073, care Houston Lighting & Power Co.

INDIANAPOLIS—Monday, 12:15 p. m. Secretary, A. H. Smith, Po. 13580, care Ford Motor Car Company, 1315 East Washington Street.

KANSAS CITY—Third Friday each month, 12:15 p. m., Hotel Muehlebach. Secretary, T. R. Harber, Po. 18908, 1500 Grand Avenue.

LA CROSSE—First Thursday each month, Elks Club, 6:00 p. m. Secretary, Dan J. Whalen, Po. 16022, care Thill-Manning-Whalen Company.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Company.

LOS ANGELES—Wednesday, 12:00 m., Jahnke's Tavern, 534 South Spring Street. Secretary, Clifton Peters, Po. 12734, 108 Edison Building.

LOUISVILLE—Tuesday, 12:15 p. m., Hotel Henry Watterson. S. B. Storm, Po. 9781, care General Electric Company.

MANSFIELD—Date and place of meeting from Secretary, H. A. Waite, Po. 16625, care Federal Sign System.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel. Secretary, W. R. Murphy, Po. 14021, care Meadville Telephone Company.

MILWAUKEE—Second Tuesday each month, Hotel Plankington. Secretary, F. V. Ziekursch, Po. 16625, 436 Public Service Building.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second Avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

MUSKOGEE—Secretary, F. H. Neber, Po. 19815, care Peabody Electric Company.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Company.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne Street, New Orleans, La.

NEW YORK—Place and date of meeting from Secretary, F. M. Feiker, Po. 17197, care Electrical World, Tenth Avenue and Thirty-sixth Street.

OKLAHOMA CITY—Monday, 12:15 p. m., Lee Huckins Hotel. Secretary, A. L. Mullergren, Po. 18853, care Berham Engineering Company.

PEORIA—First and third Saturdays of each month, 1:00 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Company.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon Street.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, R. Gray Jones, Po. 16094, care Cutter-Hammer Company.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's Restaurant, Kellog Street. Secretary, J. O. Roser, Po. 10412, care General Electric Company.

RICHMOND—Third Wednesday of each month, Business Men's Club. Secretary, L. E. Walker, Po. 6610, care Western Electric Company.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Company.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto Avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Company.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Redpath, Po. 7739, 505 Rialto Building.

SPOKANE—First and third Wednesdays of each month, 12:00 m., Davenport's Hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Company.

STARK COUNTY—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

ST. LOUIS—Tuesday, 12:15 p. m., American Annex Hotel. Secretary, Geo. McD. Johns, Po. 9052, Room 401, City Hall.

ST. JOSEPH, MO.—Secretary, .W R. Thomas, Po. 1489, care American Electric Company.

TULSA, OKLA.—Monday, 12:00 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G. Walker, Po. 6871, 18 West Third Street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Company.

WATERTOWN (WIS.)—7:00 p. m., last Thursday each month, New Commercial Hotel. Secretary, H. J. Hippler, Po. 20007, care Wisconsin Gas & Electric Company.

WICHITA—First and third Mondays of each month, 12:00 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Company.

WINNIPEG—Every other Thursday, 12:15 p. m., Fort Garry Hotel. Secretary, C. T. Kummen, Po. 15957, 386 Donald Street.

* * * *

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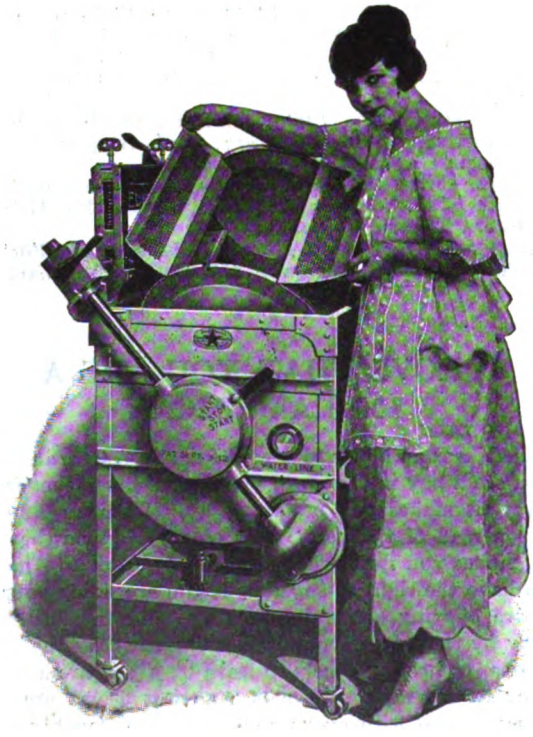

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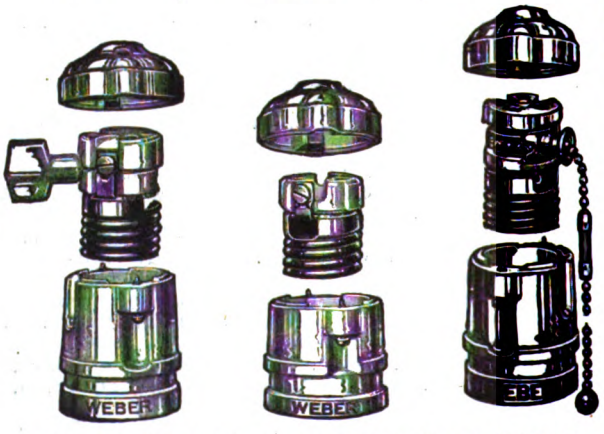

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THE JOVIAN

Volume Twelve NOVEMBER, 1918 Number Twelve

Report of Sixteenth Annual Convention
The Jovian Order
Dallas, Texas---October 24th and 25th, 1918

THE Sixteenth Annual Convention of the Jovian Order, held at Dallas, Texas, on October 24th and 25th, was a complete success, judged by attendance, interest in the proceedings on the part of the delegates, the constructive measures adopted, and by every other standard.

The Convention was called not only under the expected handicap of difficult conditions due to the war, but the unlooked for influenza epidemic which gripped the country shortly before the designated dates, too late to allow a postponement.

In spite of these existing discouragements to travel, the business sessions were as well attended as any like sessions at any preceding convention. While this attendance in the main represented Southwestern Jovians, still there was a satisfactory number from various parts of the country.

The proposed changes in the Jovian Constitution, covered later herein, had been put in print and widely distributed prior to the Convention, and copies furnished to each delegate when he registered. This plan resulted in not only added interest, but in the delegates coming to the meetings prepared to enter into intelligent discussion.

The morning of October 24th was devoted to the reception of visitors, and their registration. The Convention was called to order at noon, at luncheon at the Palm Garden of the Adolphus Hotel, with the invocation by Rev. W. M. Anderson and an address of welcome by Hon. Joe E. Lawther, Mayor of Dallas.

Jupiter J. F. Strickland responded, and was followed by Hon. Barry Miller, of Dallas, who delivered an instructive address entitled, "The Electrical Interests and the War."

The first business session was called to order in the same hall, immediately following the luncheon, at 1:30 p. m. Jupiter Strickland opened the meeting with a short address, covering the purposes of the gathering, and in brief the matters that would be placed before it. Jupiter then, following the precedent established by previous Jupiters, appointed a permanent chairman in the person of Charles W. Davis, of Dallas.

Following the reading of communications from absent members, Mercury presented his annual report, which is given in its entirety elsewhere in this issue.

Following the reading of Mercury's report, the chair announced the personnel of the various committees specified by the Constitution, as follows:

Nominating Committee: Jupiter J. F. Strickland, Po. 30-103, Dallas, Chairman; Past Jupiters, Henry L. Doherty, Po. 3208-33, New York; Thomas A. Wynne, Po. 11457V, Indianapolis; Homer E. Niesz, Po. 306V, Chicago. Reigning Congressmen, Galen Crow, Po. 925V, Oklahoma City; Joseph Insull, Po. 16729, Pittsfield, Mass.; Julien Binford, Jr., Po. 1174-117V, Atlanta.

Committee on Resolutions: Past Jupiter Charles A. Newning, Po. 2-98V, Houston, Chairman; A. Hardgreave, Po. 20609, Dallas; H. L. Monroe, Po. 5-115V, Chicago; John S. Bonner, Po. 23, Houston; J. R. Kearney, Po. 659-99V, St. Louis; M. F. Sterett, Po. 93, Dallas; R. S. Wakefield, Po. 2606, Dallas.

Committee on Mercury's Report: C. E. Calder, Po. 12078, Dallas, Chairman; Charles L. Martin, Po. 176-56V, Dallas; Harry G. Glass, Po. 2974, Houston; R. W. Van Valkenburg, Po. 1302, Dallas; Harry Hobson, Po. 56, Dallas.

Committee on Credentials: Arthur J. Binz, Po. 1921-97V, Houston, Chairman; J. L. Nunn, Po. 16104, Amarillo; H. G. Wharton, Po. 6653, San Antonio; E. C. Brown, Po. 6982, Chicago; J. R. Walter, Po. 16611, Chicago.

Committee on Jupiter's Report: Charles W. Davis, Po. 58, Dallas, Chairman; C. W. Hobson, Po. 1-114, Dallas; Charles A. Newning, Po. 2-98, Houston; Arthur J. Binz, Po. 1921-97V, Houston; H. O. Clarke, Po. 6629, Houston; W. B. Head, Po. 139-108, Dallas; J. E. Farnsworth, Po. 28, Dallas; William Hand, Po. 796, Kansas City.

The Fifteenth Annual Convention, at New York, instructed the Sixteenth Jupiter to appoint a committee to re-write the Jovian Oath. Accordingly, Jupiter Strickland, during the year appointed Past Jupiter Charles A. Newning, who was called upon to present his report, and replied with the reading of a new Jovian Obligation, excellent in theme and phrasing, which was unanimously adopted. The Oath as presented by Past Jupiter Newning will in the future be incorporated in all Jovian Rituals in place of the obligation heretofore used, thus making the Ritual complete as the work of Past Jupiter Newning alone.

Following the reading of an address on "Jovian Insurance," by Lynton T. Block, St. Louis, of the Employers' Indemnity Corporation (the company writing Jovian insurance), a brief explanation of the amendments to be later considered by the Convention was made by Jupiter Strickland and the meeting adjourned to 9:30 a. m., October 25th.

At the morning session, October 25th, following the reading of communications, the Committee on Jupiter's Report submitted its findings in the following words:

"We have made a careful study of all amendments to the Constitution under consideration, and it is our firm belief that the adopting of these amendments by the convention is absolutely necessary at this time in order to provide a means whereby the Jovian Order may successfully continue to exist.

"The amendments as proposed are all of a constructive nature and should meet with the unanimous approval of the Jovian Convention, to whom they will be submitted.

"Your committee unanimously endorse these amendments, and recommend that they be given the unanimous vote of the Convention."

(Continued on page 8)

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THE JOVIAN

published monthly by

THE JOVIAN ORDER

ELL C. BENNETT, Po. 3932-13V, Editor
W. R. JOYES, Po. 13813, Associate Editor

Syndicate Trust Building, St. Louis, U. S. A.

All matter for the news columns of The Jovian, and advertising copy, should reach the Central Offices not later than the first of each month.

Advertising rates on application

SIXTEENTH JOVIAN CONGRESS

J. F. Strickland, Po. 30-103, Sixteenth Jupiter, Dallas, Texas.

District 1—William R. Phipps, Po. 10676, Neptune, Galveston, Tex.
District 2—Joseph Insull, Po. 16729, Mars, Pittsfield, Mass.
District 3—Harry W. Alexander, Po. 17191, Vulcan, New York City.
District 4—Arthur G. Pierce, Po. 2896, Pluto, Pittsburgh, Pa.
District 5—T. J. Creaghead, Po. 3013, Triton, Cincinnati, Ohio.
District 6—Julien Binford, Jr., Po. 1174V, Avrenim, Atlanta, Ga.
District 7—W. R. Power, Po. 2784, Apollo, Huntington, W. Va.
District 8—Galen Crow, Po. 925, Hercules, Guthrie, Okla.
District 9—L. O. Ripley, Po. 7042V, Ajax, Wichita, Kan.
District 10—Henry N. Remington, Po. 678V, Argus, Peoria, Ill.
District 11—William T. Wallace, Po. 1716, Amphion, Boise, Idaho.
District 12—H. L. Woolfenden, Po. 1062V, Atlas, Denver, Colo.
District 13—J. N. Colkitt, Po. 2627, Comus, Los Angeles, Cal.
District 14—P. T. Davies, Po. 8818, Chiron, Montreal, Can.
District 15—George L. Guy, Po. 4727, Cadmus, Winnipeg, Man.

Ell C. Bennett, Po. 3932-13V, Mercury, St. Louis, Mo.
In Charge of Central Offices.

PAST JUPITERS' ASSOCIATION, 1917-18

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Past Jupiter One, Dallas, Tex.

Vice-President

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Past Jupiter Six, Buffalo, N. Y.

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Past Jupiter Nine, Colorado Springs, Colo.
ROBERT L. JAYNES, Po. 1421-50
Past Jupiter Ten, Massaponax, Va.
FRANK E. WATTS, Po. 1509-47
Past Jupiter Eleven, New York City.
W. N. MATTHEWS, Po. 496-44V
Past Jupiter Twelve, St. Louis, Mo.
HOMER E. NIESZ, Po. 306V
Past Jupiter Thirteen, Chicago, Ill.
THOS. A. WYNNE, Po. 11457V
Past Jupiter Fourteen, Indianapolis, Ind.
HENRY L. DOHERTY, Po. 3208-33
Past Jupiter Fifteen, New York City.

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Amendments to the Jovian Constitution

Adopted at the Sixteenth Convention Dallas, Texas, Oct. 24-25, 1918.

UNDER Article 5, relating to eligibility to membership the restriction upon railroad station agents was removed local passenger and freight agents of steam and electric railroads were also made eligible, and officers or directors in corporations engaged either in the manufacture, sale or distribution of electricity, or in the manufacture, sale or distribution of electrical apparatus, or in the telephone or telegraph business.

Under Article 7, relating to Jovian dues, in place of the annual dues of $4.00, the following was adopted: For the purpose of collecting dues only, the membership of this Order shall be divided into the following classes:

1. Active Members, whose annual dues shall be..... $ 2.00
2. "Class A" Members, whose annual dues shall be..... 5.00
3. Contributing Members, whose annual dues shall be.. 10.00
4. Patron Members, whose annual dues shall be..... 20.00

payable in advance on the 16th day of October of each year. All dues of league members shall be paid through chartered Jovian leagues. Any member can choose the class of membership desired.

Each league secretary shall retain fifty per cent of all dues collected for services rendered in collecting same, this payment to be used for league purposes.

It will be noted that the above amendment makes the selection of class of membership entirely within the discretion of the member, who, it is expected, will base his decision upon his interest, and the benefit which he believes he derives from the Order. It is also expected that the active membership shall be held largely by the younger members of the Order, who are actively engaged in field work for the organization, and that the higher classes of membership shall be accepted by men in positions of more importance and of greater compensation.

Under Article 8, Sections 3 and 4, covering nomination and election of officers, an amendment was adopted, in all important features following the amendment adopted at the previous Convention at New York, with the exception that the inconsistencies in that previous amendment were eliminated.

Relating to the office of Mercury, the old restriction was removed, which provided that a candidate for the office of Mercury must receive, not later than thirty days prior to the election, the approval of three-fourths of the Past Jupiters' Association.

Space here does not permit the publication of the new amendment, but it is included in the printed copy of the Constitution as it now stands, copy of which will be sent to any member upon request.

A number of amendments were passed, creating an elective body of six men, to be known as "Jupiter's Cabinet," designated, nominated and elected in the same manner as Jupiter and Mercury; three members of the Cabinet to be first elected for a term of one year, and three for a term of two years; thereafter three members to be elected annually, to serve for a term of one year, or until their successors are elected.

Jupiter's Cabinet shall be responsible to the Order for the faithful performance of their duties, which include supervision over the management and conduct of all affairs of the Order, and the exercise of all powers of an executive nature not elsewhere placed by the Constitution.

In effect, Jupiter's Cabinet fills a need which the Jovian Order has long felt, to-wit: A Board of Directors, Executive Committee, or whatever you please to term it, who will assist Jupiter and Mercury in solving the financial and executive questions of the affairs of the Order.

In order that this necessary body shall become active during the new administration, the By-Laws provide that the first Cabinet must be nominated by a committee selected at the

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Sixteenth Convention (the Dallas Convention) and elected by a majority vote of that Convention.

Under Article 14, relating to Jovian Leagues, Section 10 has been inserted, as follows:

"Corporations engaged either in the manufacture, sale or distribution of electricity for light, heat, power and other purposes, or in the manufacture, sale or distribution of electrical apparatus, or in the telephone or telegraph business, may become underwriting members of any Jovian League."

(Editor's Note: This privilege is entirely a selective one on the part of a company, and is not obligatory in any manner whatsoever.)

Any such member may be subject to pay reasonable assessments levied by Jupiter's Cabinet through Jovian Leagues, to care for the expense of the constructive work of the Jovian Central Office not otherwise covered by dues and other receipts. Provided, the whole of any such assessment during one year shall not exceed one-twentieth of one per cent of the annual gross earnings of any such member received in the city in which the Jovian League of which it is a member is located. Local leagues shall retain fifty per cent of all such collections for local purposes, and remit fifty per cent to Jovian Central Office.

The above constitute all of the amendments passed at the Dallas meeting, with the exception of some few unimportant corrections in phraseology, and received the unanimous approval of the Convention, as was necessary to their acceptance, due to the fact that they had not previously been printed and sent to each member of the Order.

Jupiter J. F. Strickland, at the Convention, briefly outlined the purposes and operation of some of these amendments; for the enlightenment of those members who were not present, we are quoting his remarks, in part, as follows:

"You have heard Mercury's report. That is evidence enough that we need to do something to put the Jovian Order on a more solid financial basis.

"You will find only a few important amendments. One is a reduction in the dues, or a schedule of dues starting at $2.00, instead of $4.00—running from $2.00 to $20.00. Active members will in future pay $2.00; other classes of members will pay $5.00, $10.00 and $20.00 each, depending on the class. The policy will be to leave it to the applicant as to the class of membership that he accepts. It is contemplated, however, that the younger Jovians, the younger men, who have not yet acquired positions or business interests that pay them large salaries, will join the Order first by becoming active members. It is further contemplated that men who draw larger salaries, have larger interests, larger investments to protect, will pay the larger dues. The man who pays $2.00 has all the rights and privileges of the man who pays $20.00, so far as fraternalism and good-fellowship apply, and further is safeguarded by holding a voting majority in the Order.

"It is further contemplated and provided in the proposed amendments, that there will be a Jupiter's Cabinet. Hereafter this Cabinet will be elected as other officers of the Order, but at this time a special provision is made to elect them.

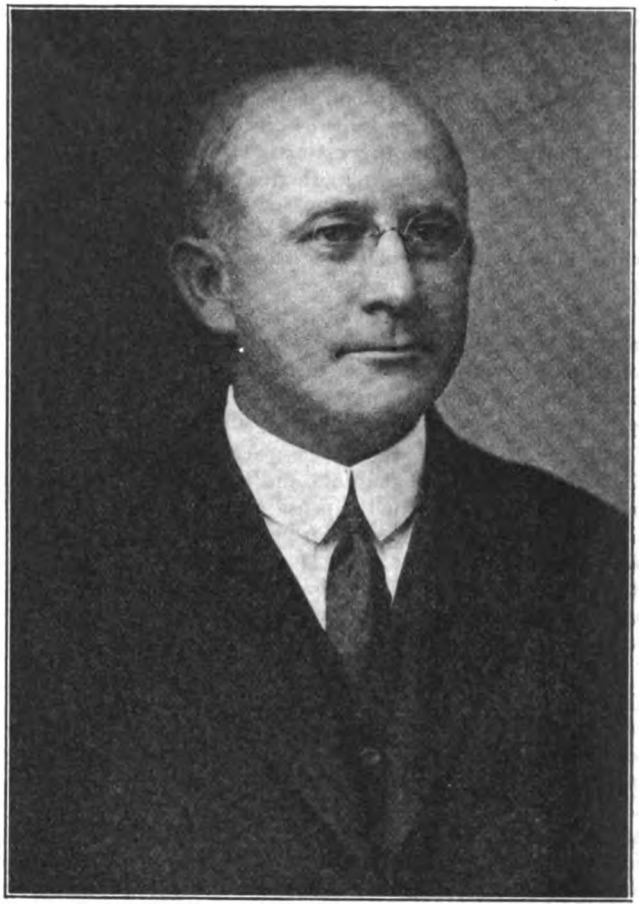
"We have never had an Executive Committee, Finance Committee, Board of Directors—whatever you may term them in your mind, as you think of them; and such a body was, perhaps, not essential if only the fraternal features of the Order were to be considered; but there is a commercial side to this organization, because of the industry qualification that makes a man eligible to become a member. The tying of eligibility to the particular character of business that he is connected with brings in the commercial feature.

"This being true, we need some commercial minds working to watch our finances, to watch our credit; in other words, to provide finances, if you please, and provide credit. Credit will get money, and if we have it we are successful.

(*Continued on page 8*)

SEVENTEENTH JUPITER JOVIAN ORDER

L. O. RIPLEY, Po. 7042V
WICHITA, KANS.



JUPITER-ELECT, L. O. RIPLEY, Po. 7042V, is a native of the State of New York, where he resided until 1909. He received his education at Union College, Schenectady, N. Y., graduating from that institution in 1900. Immediately following his graduation he engaged in electrical storage battery work, following which for a period of two years he engaged in electrical construction work. In 1903 he was made superintendent of lighting and power for the Schenectady Railway Company, which at that time was operating the railway system of Schenectady and the interurban systems running to nearby towns. This system also included the Schenectady Illuminating Company. In 1906, when the electrical systems were sold to the steam railroad interests, Jovian Ripley was made manager of the Schenectady Illuminating Company, which position he occupied until the fall of 1909, when he went to Wichita, Kansas, and became Vice-President and General Manager of the Kansas Gas & Electric Company, the company with which he is now affiliated as Vice-President.

Jupiter Ripley has been an enthusiastic Jovian since his initiation into the Order, June 13, 1912, and has always been an active worker to promote its interests. During the past administration he served on the Jovian Congress, representing the Ninth District, in which Wichita is located.

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Amendments to the Jovian Constitution

(*Continued from page 7*)

"The purpose of this Cabinet is, first, to pass on the expense account before the money is spent. It is contemplated that Mercury will prepare a budget forecasting the expenses of the year, that he will also forecast the income from dues. This Board of Directors, or Cabinet, will sit around the table with Jupiter and Mercury and look it over. If by counsel they can find some way to reduce that, as business men they will do it.

"The difference in the estimate of what will come in, and the expense account—assuming there will be, and in fact knowing that there will be a deficit—must be covered by an assessment to be made by Jupiter's Cabinet on the underwriting companies, which it is also contemplated will come into the leagues—that I will talk about later.

"These Cabinet members by the very nature of their duties must be members of firms, or executives of corporations, or authorized representatives of such, in order to be eligible to sit in this Cabinet; they must also be men who pay $20.00 a year dues or have a life membership in the Order.

"Hence, sitting on the expense account in advance, seeing the difference between the dues and the income, the estimated income and the estimated expense account, they know at the time they must assess the properties, which they own or control or direct, for enough to make good the deficit. With that in mind, they are going to be economical in their administration, and yet they are going to be in position to provide the money to pay the bills of this Order.

"We might think that we can go along, saying that all similar Orders are hard-up and always have been, and that we can exist and grow with that condition. That is not the case, for in that condition we can not grow. No individual was ever progressing when he owed his friends or neighbors or acquaintances; when on every turn he made, somebody was presenting him a bill; but the same man put in easy circumstances, given a credit, given sufficient finances to take care of his obligations, he becomes a stronger man in the community. Now just as it applies to a man—it doesn't make any difference whether he deals in small figures or larger, the principle is the same—as it affects a man, it will affect this Order or it will affect any other Order; so we see the necessity of these underwriters.

"Now to those of you gentlemen who are thinking about your properties, this contemplated or proposed amendment does not say that any company **must** become an underwriter; there is merely a provision, if you please, that firms or corporations in the manufacturing business, in the distributing business, in the utility business, any of those kindred lines that are eligible to become members, that furnish the membership to this organization, so to speak, **may** become underwriters. It will be a voluntary act of such firms or corporations.

"With that condition, it is assumed that executives of the various industries will see the necessity, or the advisability, of becoming underwriters. As they become underwriters, they immediately place themselves subject to an assessment to be made by Jupiter's Cabinet to take care of the deficit we have been talking about. But they are limited; they cannot assess any one concern more than one-twentieth of one per cent of the gross business done in the city in which the local league is located that they underwrite—so the Cabinet can not hurt any of our various interests; but a small amount taken from each interest throughout the country where these leagues are located and should be located will provide money enough to take care of all the necessities of the leagues—that is, the deficits, if there be any—and especially the deficit of the national Order.

"Permit me to say that there is not another organization in history such as the Jovian Order, because of the community of interests of its members. Follow it thus: The Order can be made into a splendidly constructive vehicle of contact between the utility and the public—and what helps the utility helps the entire industry. The manufacturer deals with the jobber and dealer, the jobber and dealer trade with the utility; if the utility is unpopular, does not get along with its public, does not have credit, is not able to sell its securities, it can not buy goods from the jobber and dealer, and they in turn must hold back orders otherwise going to the manufacturer.

"Now I don't think it is necessary to talk to you gentlemen further. We have been talking it for days. Some of us have been thinking it for months. Mercury, no doubt, could tell you of his troubles in taking care of the finances of this Order and 'getting by,' but possibly that isn't necessary. We are confronted with the condition that has to be met in some way, and the proposition that is now submitted to you is one way of doing it; possibly it is not the best way, but it is the only way we have before us at this time. I don't think it is a finished piece of work. We had overlooked earlier in the year these conditions, and didn't prepare these amendments in time to have them advertised some months in advance. The only other way they may be adopted is by your unanimous affirmative vote."

* * * *

Report of Sixteenth Annual Convention The Jovian Order

(*Continued from page 5*)

Following the report of this committee, Jupiter Stickland was again called upon to make certain points clear, his address being followed by general discussion and the unanimous adoption of the amendments as presented. This action was followed by the carrying of a resolution providing that the complete Constitution be printed, with the addition of the amendments just passed, and be placed at the disposal of the membership.

The amendments as passed provided for the election each year of a body of six Jovians, to be known as "Jupiter's Cabinet," and that for the Jovian year of 1918-1919, this Cabinet would be nominated by a committee appointed by Sixteenth Jupiter, and elected by a majority vote of the Sixteenth Convention.

In accordance with this amendment, Jupiter appointed as the committee to nominate members for Jupiter's Cabinet the same committee appointed to act upon his report, stating that this decision was based on his belief that this particular committee had given careful study to the entire matter, and were therefore best qualified to make intelligent selection of nominees.

The Committee on Mercury's Report was then called upon, and submitted the following:

"Your Committee on Mercury's Report to the Sixteenth Annual Convention of the Jovian Order, beg to report as follows:

"We recommend that the report be accepted as read, and that Mercury be complimented upon the terseness and clarity of the report.

"We call the attention of the Order to the economies effected by Mercury in the handling of the Central Office this year. Even with these economies effected, the high-class service previously furnished by the office has been continued.

"According to Mercury's report, the Order owes $18,686.14 more than it has funds to pay. The deficit of the Order, considering certain jewelry, costumes, fixtures, etc., at a reasonable price, as assets, amounts to $15,936.14. We presume that, as provided in the Constitution, report by auditors on the operations of the Order for the past Jovian year will be duly made to outgoing Jupiter J. F. Strickland, and the incoming Jupiter.

"In our opinion, these facts brought out by Mercury in his report emphasize the need of the suggested changes in the Constitution whereby the Order may be placed on a sound financial basis, and we recommend their adoption. We especially urge upon the Order the adoption of Mercury's suggestion that local Jovian Leagues should be organized, and that interest should be stimulated to the utmost in these local groups."

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The report of the Committee on Mercury's Report was then unanimously adopted by the Convention.

The report of the Nominating Committee was then read by Mercury, preceded by the statement that in a number of cases the Nominating Committee desired to report that it seemed advisable to retain in office certain members of Congress and Statesmen who held office last year, and that this was legal, in that the Constitution provided that a Congressman or Statesman holds office until his successor is elected, so that where there are no nominations, the incumbent automatically continues in office.

Nominations were then read as follows: JUPITER: L. O. Ripley, Po. 7042V, vice-president Kansas Gas & Electric Co., Wichita, Kans.; MERCURY, Ell C. Bennett, Po. 3932-13V, 1415 Syndicate Trust Building, St. Louis, Mo.; First District NEPTUNE, Hartwell Jalonick, Po. 1255, Dallas Power and Light Co., Dallas, Tex.; Second District MARS, Chas. B. Burleigh, Po. 398, General Electric Co., Boston, Mass.; Third District VULCAN, G. V. W. Pelz, Po. 18674, New York Telephone Co., New York; Fourth District PLUTO, H. E. Shelton, Po. 14400, Wilmington & Philadelphia Traction Co., Wilmington, Del.; Fifth District TRITON, P. B. Zimmerman, Po. 7305V, N. E. L. A., Cleveland, O.; Sixth District HERCULES, Thomas W. Moore, Po. 5853, Third National Bank Building, Atlanta, Ga.; Seventh District AVRENIM, Guy E. Seiler, Po. 7479, Virginia Railway & Power Co., Richmond, Va.; Eighth District APOLLO, no nomination (leaving in office Galen Crow, Po. 925V, Public Service Co., Guthrie, Okla.); Ninth District AJAX, Fred Johnson, Po. 177V, Wagner Electric Manufacturing Co., St. Louis, Mo.; Tenth District ARGUS, Carl Golin, Po. 12385V, Electrical Machinery Sales Co., Milwaukee, Wis.; Eleventh District AMPHION, no nomination (leaving in office W. T. Wallace, Po. 1716, Idaho Power Co., Boise, Idaho); Twelfth District ATLAS, T. B. Burnite, Po. 3426V, Western Engineering Specialty Co., Denver, Colo.; Thirteenth District COMUS, no nomination (leaving in office J. N. Colkitt, Po. 2627, John A. Roebling's Sons Co., Los Angeles, Cal.); Fourteenth District CHIRON, George C. Rough, Po. 512-113V, Packard Electric Co., St. Catharines, Ont.; Fifteenth District CADMUS, H. W. Billings, Po. 5054, Northern Electric Co., Winnipeg, Man.

Nominations for Jovian Statesmen

ALABAMA—No nomination (leaving in office H. W. Matthews, Po. 4476, Burgoon-Matthews Electric Co., Birmingham); ARIZONA, CALIFORNIA, NEVADA—No nomination (leaving in office Lewis E. Sperry, Po. 9514, New York Insulated Wire Co., San Francisco, Cal.); ARKANSAS—No nomination (leaving in office C. J. Griffith, Po. 13901, Little Rock Railway & Electric Co., Little Rock); CONNECTICUT—No nomination (leaving in office T. L. Holmes, Po. 3046, Western Electric Co., West Haven, Conn.); COLORADO—No nomination—selection to be left to newly elected Congressman; DISTRICT OF COLUMBIA—No nomination; FLORIDA—No nomination; GEORGIA—G. E. Watts, Po. 12482, Electric Service Supplies Company, Atlanta; IDAHO—No nomination (leaving in office Ernest C. Kiersted, Po. 10258, Idaho Power Co., Twin Falls); ILLINOIS—No nomination (leaving in office L. C. Spake, Po. 15397V, Western Editor, McGraw-Hill Publishing Co., Chicago); INDIANA—Oscar Carman, Po. 2414, General Electric Co., Indianapolis; IOWA—No nomination; KANSAS—No nomination; KENTUCKY—no nomination (leaving in office J. B. Riley, Po. 5297, Westinghouse Lamp Co., Louisville; LOUISIANA—No nomination (leaving in office W. A. Porteous, Po. 9226, Western Union Telegraph Co., New Orleans); MAINE—No nomination; MARYLAND—No nomination; MASSACHUSETTS—Selection to be left to new Congressman; MICHIGAN—No nomination (leaving in office J. A. Cavanaugh, Po. 11199, B. H. & St. Joe Railway Co., Benton Harbor; MINNESOTA, NORTH AND SOUTH DAKOTA—No nomination (leaving in office W. H. Vilett, Po. 3675V, Sterling Electric Co., Minneapolis; MISSISSIPPI—No nomination; MISSOURI—William Hand, Po. 796, General Electric Co., Kansas City; MONTANA—No nomination; NEBRASKA—No nomination (leaving in office I. B. Zimman, Po. 1411, Omaha Electric Manufacturing Co., Omaha; NEW HAMPSHIRE—No nomination; NEW JERSEY, DELAWARE—John P. Alexander, Po. 11892, General Electric Co., Trenton, N. J.; NEW MEXICO—No nomination (leaving in office J. A. Shepard, Po. 16106, Deming Ice & Electric Co., Deming, N. M.); NEW YORK—George Williams, Po. 6849, Henry L. Doherty & Co., New York City; NORTH CAROLINA—No nomination; OHIO—W. V. C. Bulkeley, Po. 17998, Columbus Railway, Power & Light Co., Columbus, O.; OKLAHOMA—P. G. Walker, Po. 6871, Public Service Co. of Oklahoma, Tulsa; OREGON—No nomination; PENNSYLVANIA—No nomination (leaving in office George H. Criss, Po. 3364, Westinghouse Electric & Manufacturing Co., Pittsburgh); RHODE ISLAND—No nomination (leaving in office E. R. Davenport, Po. 8019, Narragansett Electric Light Co., Providence; SOUTH CAROLINA—No nomination (leaving in office W. W. Fuller, Po. 16462, Isle of Palms Traction Co., Charleston); TENNESSEE—No nomination (leaving in office C. J. R. Watson, Po. 2131V, Electric Supply Co., Memphis); TEXAS—No nomination (leaving in office H. O. Clarke, Po. 6629, Houston Light & Power Co., Houston); UTAH—No nomination (leaving in office Charles H. Talmadge, Po. 1431, Western Electric Co., Salt Lake City); VERMONT—No nomination (leaving in office E. E. Larrabee, Po. 1145, Twin States Gas & Electric Co., Bennington); VIRGINIA—No nomination (leaving in office Guy E. Seiler, Po. 7479, Virginia Railway & Power Co., Richmond, Va.); WASHINGTON—No nomination; WEST VIRGINIA—No nomination (leaving in office W. R. Powers, Po. 2784, Consolidated Heat, Light & Power Co., Huntington); WISCONSIN—Selection to be left to new Congressman; PROVINCE OF ALBERTA—No nomination (leaving in office Norman S. Richards, Po. 8985, Northern Electric Co., Calgary); PROVINCE OF MANITOBA—J. S. Henry, Po. 5994, Fire Hall, Winnipeg, Man.; PROVINCE OF QUEBEC—No nomination (leaving in office E. N. Hyde, Po. 1614, Northern Electric & Manufacturing Co., Montreal); PROVINCE OF BRITISH COLUMBIA—No nomination; PROVINCE OF SASKATCHEWAN—No nomination; PROVINCE OF ONTARIO—No nomination.

The report of the Nominating Committee was accepted, and the nominees as read unanimously elected to their respective offices. The meeting was then adjourned to 7 p. m., to reconvene at the closing banquet at the Oriental Hotel.

At the evening session, the Committee to Nominate Jupiter's Cabinet reported as follows:

"The undersigned, composing a committee appointed by Jupiter J. F. Strickland to nominate candidates for Jupiter's Cabinet for the next (the Seventeenth) Administration, present for the consideration, acceptance or rejection of this Convention, the following nominees: H. J. Pettengill, Po. 119, St. Louis; W. B. Head, Po. 139-108, Dallas; Martin J. Insull, Po. 20727, Chicago; Henry L. Doherty, Po. 3208-33, New York; Henry Harris, Po. 2888-48V, Pittsburgh; J. F. Porter, Po. 2097-70, Kansas City Mo.; and further recommend that the first three nominees named herein shall serve for a period of two years, the other three nominees for a period of one year."

The report of this committee was then accepted, and the nominees named in same unanimously elected.

The report from the Resolutions Committee was then submitted, and included resolutions of condolence to Past Jupiter Eleven, Frank E. Watts, Po. 1509-47, New York City, upon the death of his wife; a resolution of appreciation to the officers of the Sixteenth Administration; a resolution declaring it to be the steadfast purpose of the Order to use its utmost resources in the aid of our country in the present conflict, and the con-

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currence of the Order in the President's declaration of principles as a basis for a permanent and just peace, to be dictated by the United States and its associates to the Central Powers. These resolutions were unanimously adopted, and ordered spread upon the minutes.

A resolution was then carried, authorizing the incoming Jupiter to appoint a committee of three to rewrite, or rather, rearrange the Jovian Constitution, so that the clauses of same would be consistent each with the others.

Following this motion, the Sixteenth Annual Convention was adjourned, and the entertainment features of the meeting were presented. These included an address by Hon. Wm. H. Atwell, entitled, "Our Flag and the Great War;" an address by Paul M. Lincoln, Po. 5026V, of Pittsburgh; by Gypsy Smith; by Past Jupiter Two, H. F. MacGregor, Po. 21, and Harry L. Monroe, Po. 5.

Fred W. Slater, Po. 10685, of Dallas, as toastmaster, carried the closing banquet in his usual efficient and graceful manner, assisting in making of it the equal of the high standard set by the previous Jovian Annuals.

Serious business discussion featured the entire Convention, in keeping with the spirit of the times, somewhat leavened by the delivery by John S. Bonner, of Houston, of his famous negro sermon, by a Convention publication edited and printed by R. S. Wakefield, under the euphonious title of "Wakefield's Weakly Wallop," and by the presentation to Past Jupiter Charles A. Newning of a silver clock and diamond-studded cuff links as tokens of the love and respect of the Jovians assembled at the Convention, and as small acknowledgment of his untiring efforts in the interests of the Order. The presentation speech was made by Jovian J. E. Farnsworth, Po. 28, of Dallas, one of Past Jupiter Newning's lifelong friends, and was a beautiful and touching tribute to Jovian Newning's wonderful personality.

The principal amendments to the Constitution are given in another part of this issue, and the amended Constitution as a whole will be forwarded by the Central Office to any Jovian, upon request.

* * * *

Report of the 16th Administration of The Jovian Order

Submitted before the Sixteenth Annual Convention, by Ell C. Bennett, Po. 3932-13, at Dallas, Texas, October 24-25, 1918.

Introductory:

THIS, my seventh yearly report to the Annual Convention of the great Jovian Order, is submitted in the briefest possible form, with only such comment as seems essential to a thorough understanding of the information it contains.

As in the past, the report is divided into two sections: the first deals in membership, financial and other statistical data covering the year just closed; the second bears upon the needs of the Order for its future development.

The task of the latter section is greatly lightened by comprehensive plans made by Jupiter J. F. Strickland to be presented to this body in the form of amendments to the existing Constitution.

SECTION ONE

Membership:

Let us speak first of those who by right belong at the top of all Jovian lists—our fighting men. It has been a difficult matter to secure exact information apace with the enlistment of our boys, and unquestionably the figure we give does not represent nearly the total as it stands today, but, even as we have it, it is a record of which we may well feel proud, representing as it does approximately ten per cent of our active membership. Four hundred and eighty-eight good-standing Jovians of record, on the fields of France, under the Star Spangled Banner, are assisting in beating the Hun at his own game.

These Honor Men are carried by the Order, and supplied with THE JOVIAN. The Central Office has eagerly accepted many opportunities for other helpful service and has received numerous letters of appreciation. The great regret is that we have not found bigger ways of doing what our hearts long to do.

The last potential issued this administration is 20,710. Of this number 5065 are in good standing, the addresses of 1,783 are unknown, 9,358 are in arrears, 799 are dropped, 1 are expelled, 3,265 have resigned and 436 are deceased.

The good-standing membership at the close of the Fifteenth Administration was 7,210.

Of the 9,358 members who are in arrears, and 3,265 who have resigned, we are certain a great majority would welcome a return to the good-standing list if local activity could be secured. The means with which to secure that local interest are covered in the second section of this report.

A loss of membership in the Jovian Order this year was to be expected and occurred, just as it did in every other organization. It would have been a miracle had it been otherwise, because of conditions incident to the European conflict that are too well known to all of you to need enlargement upon here.

Many associations have suffered even to a greater extent than has our Order.

One example which will perhaps bring home the truth of this better than any other I can furnish, is the experience of the powerful National Electric Light Association, with which you are all very familiar. Examining its last annual report, made a short time ago, we find the following: "As was to have been expected, owing to the abnormal conditions prevailing during the past year, there has been a substantial decrease in our membership * * * "; figures are then given showing that in all classes of members they suffered withdrawals amounting to 4,812, approximately one-third of the membership of the previous year. The N. E. L. A. will, of course, come back, as its splendid work justifies it should, just as will our Order come back, when the chief business of the Nation ceases to be that of licking the tar out of Fritz.

During the year 57 Rejuvenations were held, as compared to 53 the previous year, an increase of 4, and 796 new members initiated, as opposed to 584 brought in during the preceding year. This increase of 212, we take it, in view of conditions, is a remarkably good showing, and a sign that the Order is still capable of great development.

The cities holding the largest Rejuvenations are as follows: Tulsa, 56; Winnipeg, 50; Milwaukee, 45; Alliance, O., 43; Dallas, 43; Wilimington, Del., 41; Akron, O., 39.

The States showing the greatest gain are: Ohio, 241; Oklahoma, 107; Texas, 98; Wisconsin, 89; Delaware, 70.

The cities showing the greatest gain, given in order, are: Wilmington, Del.; Tulsa, Milwaukee, Winnipeg, Alliance, Dallas and Oklahoma City.

Wilmington, Del., with its 70 initiates during the year, furnishes the largest proportionate increase of any Jovian center, no membership being recorded there at the beginning of the year. This record is due to the untiring efforts of First Tribune H. E. Shelton, Po. 14,400, and his associates, who have made their city and State one of the bright spots during these trying times. Watertown, Wis., is another shining example of what can be done by intensive effort in spite of unusual difficulties, having held three Rejuvenations under First Tribune A. R. Scheurmann, Po. 17,653, bringing their membership from zero to 31.

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Local Leagues:

There are now in active operation 21 regularly chartered Jovian Leagues, besides those affiliated unofficially, 14 of which were chartered during this year.

The cities having the largest paid league membership in their proper order, are: St. Louis, Milwaukee, Winnipeg, Richland and Ashland County League, at Mansfield, O., Columbus and Cincinnati. The following leagues have a 100% paid membership: Columbus, Akron, Wilmington, Watertown, Muskogee, Trenton, N. J. and Globe, Ariz.

The Central Office has worked in as close touch with all the leagues as possible without the assistance of field representatives, and in line with the belief that the most helpful work of the Order must be accomplished through the local chapters, has stimulated league organization in every way within its resources. The result as just outlined is exceedingly gratifying in the face of the difficulty now of any organization work not directly related to war activity.

The Leagues as a whole have done excellent work in every campaign for the forwarding of the war, in some cities taking the lead over all other local bodies.

Central Office:

The staff of the Central Office has been considerably reduced, including the release of one-half of the time of Mercury, with his compensation based accordingly. The expense of operation has been kept down to the minimum, as will be noted by the portion of this report devoted to finances. In fact, the expense, due to necessity, has been far below actual requirements for the development of the best service of which the Central organization is capable.

There have been no changes in the system of accounting, record keeping and membership files, the method instituted two years ago having met all demands upon it.

Employment Bureau:

The Employment Bureau has earned its spurs by delivering a real service not only to Jovians and the electrical industry, but in securing men for government work.

This activity of the Central Office entails considerable detail and correspondence, but makes many friends for the Order and is worth much more than it costs.

Printed Matter:

A considerable curtailment of printing expense was effected, which, however, we doubt as a wise policy if sufficient funds were available to make it unnecessary. The work of the Order needs advertising, just as does any piece of merchandise, and Jovian workers require all the assistance supplied by good publicity matter.

Jovian Jewelry:

All buttons and jewelry have been distributed at cost, in accordance with the 1917 amended constitution. This has brought about a saving of approximately $1,000.

Speakers' Committee:

The Speakers' Committee, headed by Martin J. Wolf, of St. Louis, has done some excellent work in furnishing speakers for Jovian gatherings and in the distribution of constructive information in printed form. This committee cannot be expected to strike its real stride, however, until after the war, as present conditions do not permit of men giving the necessary time to the work.

Jovian Magazine:

The Jovian Magazine has been published regularly, and has continued its policy of using a considerable portion of its space to educational material, in addition to consistent devotion to any matter that would assist in win-the-war work. It has used a total of 46¾ pages, approximately one-eighth of its total space, in display and reading matter during the year for U. S. Government purposes, and earned the expressive appreciation of several of the departments at Washington.

The magazine carried advertising to the value of $5,970.53 under conditions that have tried the resources of the advertising staffs of the biggest electrical journals. This business is all secured and held by mail solicitation only—something which many advertising men will tell you "can't be done!"

Jovian Insurance:

The results obtained by the Jovian insurance plan have been so gratifying that we have gone into some detail with respect to them.

The plan has been in effect about a year, and has had nothing but mail promotion—another type of mail solicitation, which this time the **insurance man** will say "can't be done!"

Based on the success of this activity, its appreciation by those members who have intelligently investigated it, and the proven integrity of promise of the company writing the insurance —The Employers' Indemnity Corporation, Lynton T. Block— we suggest the advisability of its intensive promotion during the coming year.

Four hundred and eighty-one policies are in force of a value of $2,200,000, premiums of $8,208, effecting a saving in premium for our members of $7,612 over similar insurance by any other company or plan. In other words, comparing the total premiums with the total saving, we find that for those members holding policies we have practically cut in half the cost of their accident and health insurance.

The plan has been expanded, so that we are now in a position to furnish both single and double, accident and health insurance.

The insurance company has lived up not only to the letter but to the spirit of every understanding we had with it, and in almost every case has made settlement on claims before any other company interested.

It has paid to Jovians or their families one death claim of $5,000, 15 accident claims amounting to $898.83, and 18 claims on health policies amounting to $623.16; a total of $6,521.99.

There can be no further question of the soundness of this plan, of the ability and willingness of the company to meet its obligations under Jovian policies, and of the fact that this Jovian benefit alone means a saving of many times the amount of Jovian dues.

Financial:

The financial statement here following is substantially correct, although subject to some slight revision due to reports not received at the time this document was written. An audited statement will be published in THE JOVIAN MAGAZINE as soon as the auditors have completed their work.

At the New York convention last year the delegates, in acknowledgment of the insistent cry of members who, perhaps, had not given sufficient serious thought to the matter, or were ill-informed, set up as one of the main tasks of this administration a material reduction in operating and overhead expense.

The adoption of that policy was against the judgment of Jupiters Doherty and Strickland, Mercury and many other members close enough in touch with the Central Office to know that every dollar spent in the past represented purchase of service or material essential to the best progress of the Order.

Based upon the complete fulfillment of an allotted task, this administration is justly entitled to the commendation of the Order, for the figures, given in the financial statement herewith presented, prove that the year just closed has been finished at an operating and overhead expense very much less than expenditures for any of the previous five years, and this in spite of the increased cost of every item purchased during war times.

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Had the income of the Order remained near the amount of the previous year, the economies effected this year would have allowed the payment of all obligations, with an additional surplus that would have wiped out approximately one-half the total deficit of all previous years. Unfortunately, however, the result was as predicted by those who did not initiate the economy method of curing ills. Reduction in the outlay of moneys previously well spent brought about a correlative lack of stimulation and interest, represented in figures by a loss of $10,996.25 net income, but a greater loss represented by the slowing up of the work of leagues and the resignation of many members.

It appeals to Mercury that this experience conclusively proves what those in closest touch with the affairs of the Order maintained last year, that the answer to the difficulties the Order encounters (and they are no more than those found by any young and growing business or association) cannot be found by a substraction from expenditures—meaning, necessarily (as we never wasted Jovian funds) a corresponding, or nearly so, reduction in useful work, and in needed personal and other contact with our leagues and members.

The Jovian Order not more than the individual, or the firm or corporation, cannot meet success without FIRST harnessing the dollar in sufficient amount to plans and methods to "get the signature on the dotted line." Our salvation—as is the salvation of any business which is coaxing a difficult market—is in so strengthening our resources that we can build upon the merit of our merchandise, the extent and quality of the publicity that educates our prospects and holds our customers, the number of channels of profiting by those increases, to an extent where we cannot be denied. Any good business man knows the truth of that principle, and it is unnecessary to further enlarge upon it.

In presenting the following financial statement, I will read first the figures representing income and outgo for last year, and then figures covering similar items this year.

Financial Statement, Sixteenth Administration of The Jovian Order

OPERATING STATEMENT

RECEIPTS

	Last year	This year
Dues	$26,584.38	$19,611.32
Initiation fees	2,805.00	577.50
Jewelry	124.68	84.75
Advertising	7,324.95	5,301.39
Rental refund	.....	105.00
Costume sales	.....	162.80
Loans	5,000.00	500.00
Total receipts	$41,839.01	$26,342.76
Excess expense over receipts	3,860.35	5,095.05
	$45,699.36	$31,437.81

EXPENSE

	Last year	This year
Dues refunded leagues	$ 330.90	$ 84.50
Jewelry	1,511.26	544.21
Salaries	16,726.44	12,278.23
Producing Magazine	11,749.92	10,355.87
Stationery and printed matter	3,000.91	1,429.91
Traveling	2,697.66	1,614.65
Dues postage	1,753.00	583.00
Letter postage	1,313.91	695.36
Office supplies	592.28	440.04
Advertising refund	113.54	176.67
Express	150.40	51.03
Telegrams	288.37	195.97
Taxes	13.87	13.87
Form letters	604.35	621.79
Fixtures	512.75	141.92
Telephone	135.67	199.79
Reporting previous convention	842.20	200.00
Auditing Central Office accounts	$ 250.00	$ 250.0
Exchange	87.76	71.5
Mercury's bond premium	50.00	25.0
C. of J. G.	50.00	120.0
Rent, Light and Heat	1,239.50	1,344.5
Initiation Refund	158.60	.....
Degree team costumes	205.01	.....
Degree team competition prizes	350.00	.....
100 Point Com.	971.06	.....
Total expense	$45,699.36	$31,437.81

(A reduction of $14,261.55).

BALANCE STATEMENT

Loans	$ 500.00	
Excess expenses over receipts	5,095.05	
Cash deficit from Fifteenth Admin.	13,091.09	
Cash deficit Sixteenth Administration		$18,686.14
Bills payable	$ 5,500.00	
ccounts payable	13,541.84	
Total payable	$19,041.84	
Cash o nhand	355.70	
Cash deficit Sixteenth Administration		$18,686.14

CONDITION STATEMENT

ASSETS

Cash on hand	$ 355.70	
Jewelry—estimated	400.00	
Merchandise	400.00	
Costumes	500.00	
Fixtures	700.00	
Printed matter and type metal	750.00	
Unpaid accounts—see memorandum	.....	
Deficit	15,936.14	
		$19,041.84

LIABILITIES

Bills payable	$ 5,500.00	
Accounts payable	13,541.84	
		$19,041.84

Memo. Unpaid accounts are represented by outstanding dues, and in their total amount to a great deal more than all liabilities of the Order. It is my belief that if the Order is financially strengthened so that it will possess the resources to rebuild local activity by organizing new leagues and assisting the old and new organizations, a majority of the outstanding dues can be collected, not only of those members who are in arrears, but also from those who have been dropped or who have resigned.

The mere sending of invoices and letters will not bring in the funds without the local interest; we have exhausted the possibilities in mail collections under those conditions to the uttermost limit.

SECTION TWO

The first section of this report I trust has made it clear that the next and succeeding administrations must promote even more actively than at any time in the past, not only all the constructive plans and methods that have to date been formulated, but additional measures to increase the effectiveness and popularization of our Order. On the carrying out of that policy undoubtedly depends not only the success, but the very life of Jovianism.

As a means to secure, first, a complete understanding by all who are, have been and should be Jovians, of exactly the necessary part in the development of the electrical industry that is filled by The Jovian Order; in other words—to state the case in familiar terms—what the industry and the members get out of it;

Second, appreciation of the past and present work of the Order and hearty co-operation in its future work, resulting in a large and active membership;

Third, the successful operation of the plans that are made at this convention. I suggest the appointment by the retiring

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and the incoming Jupiter of a national, or, rather, international (Canada being recognized) CONSTRUCTION CREW, to operate along the following or such other lines as its members may decide:

a. A general chairman and four or more vice-chairmen—men of ability and prominence in our industry who will meet whenever the duties of the Crew require meetings.

b. A Canadian and nation-wide membership of the Crew, composed of local groups of prominent and active men, each in charge of a chairman of their or the main body's selection.

c. A clear, concise definition of Jovianism, all it stands for, all it has done, can and will do, formulated by the main body and given the widest possible publicity through the local groups and otherwise.

d. Formulation of specific plans for immediate Jovian national and local activity for the duration of the war and thereafter, both with respect to win-the-war work for the Government and development work for the electrical industry, national and local.

e. Stimulation of the interest and result-bringing efforts of the local groups in every conceivable manner, by printed matter, follow-up campaigns, personal contact and otherwise, to the end that each such group will organize a local Jovian League if one is not in existence, or if the existing league is not open to rejuvenation along constructive lines.

f. To the further end that wide circulation may be given to the plans made at this gathering.

g. Creation and development of a method which through the local groups and leagues will carry out the plans of this convention.

h. The Construction Crew acting in harmony and with the advice of all Jovian officers, and using the influence and services of those officers to the limit.

i. The burden of all detail and follow-up work to be borne by the Jovian Central Office, with Mercury acting as secretary of the Crew.

The Need of the Order:

And now we come to "What's the matter with the Jovian Order?"—to the real need, apparent here, as always, when good plans are in the making that will bring Jovianism into its own.

The Jovian Order, with its triumphs and its reverses, its joys and its sorrows, its friends and its enemies, its workers and its slackers, has been my constant companion for the space of seven and one-half years. It has walked with me in the sunlight, it has laid itself down beside me in the hours of the night, and to you I may say it has not always proved to be a cheerful bedfellow.

Whether or not the unwelcome hours of comradeship may be charged to my own sins of omission or commission, to those of others, or to just the growing pains of every lusty, restless force, the fact remains that I have known its innermost thoughts and ambitions during the period of its greatest trials and successes, and may, therefore, speak with some authority.

Advice I have heard as to the things the Jovian Order must have, or must do **at once** or face immediate dissolution, as to "What's the matter with Jovianism?" which if printed on the thinnest of paper and loaded upon the largest of ships, would sink the vessel to its gunwales; and the variety equalled the quantity.

As a matter of fact, known to all who have guided the Jovian craft in the past, known to every man who has had the intelligence and the desire to correctly analyze Jovian history, the Order needs one element only which it does not now own, nor ever has possessed. I refer to ample financing.

Back through the administrations of Jupiters Dostal, Jaynes, Watts, Matthews, Doherty and Strickland, of my own knowledge—and probably since the Order's inception—one constructive plan after another, plans that meant tangible benefits to our industry and members, and assured recognition for and permanency of Jovianism, were perforce abandoned or incompletely carried out because funds were not available.

The Order has constantly struggled against the odds of using .22-caliber ammunition to load a .45-caliber gun—and that is one of the few things that can't be done and bring down your game.

The Order in those years did accomplish a great deal; it was and remains the most effective force for the promotion of that co-operation, that team-work the electrical industry so gravely needs; it more than justified the expenditure of the limited means with which it was provided, but poverty always camped upon its threshold, making it impossible to sufficiently inform its members of facts that would have satisfied them and secured additional support.

Find just one Jovian who has had the opportunity to completely acquaint himself with all the Order has accomplished who is not an enthusiast and you will make an unique discovery.

The lack of the direct contact between the Central Office and the membership at large, obtainable only through Central Office traveling representatives, has been the greatest factor in what dissatisfaction has existed, for we all know that in the great majority of enterprises it takes more than printed matter to sell to the public, no matter what the nature or the quality of the goods.

Our own United States offering the safest investment in the world, Liberty Bonds, has had to use the tongues of tens of thousands of speakers, of two million salesmen, in addition to printed publicity of a value of a billion dollars.

For at least five years prior to the Convention at Indianapolis in 1916, the Jovian Order was delivering a service to the electrical industry which, in spite of the great amount of voluntary, gratis labor on the part of Jovians everywhere, cost the Order an average of more than three dollars per member, and was receiving in return annual dues of two dollars per member.

The deficit caused by that difference between outgo and income was met in those years by initiation fees of new members; an unsound method of financing and recognized as such then and now, for as the membership increased—from four to nearly twenty thousand—the deficit naturally became greater and the opportunity to meet it less.

The Indianapolis Convention voted to meet this condition by increasing the annual dues to four dollars, and, possibly, would have thus solved the problem had not there arisen shortly thereafter the unusual demands upon men's purses which obtain to this day.

Due in part to this increase, coupled with difficult business conditions and retrenchment everywhere, a loss in membership occurred, bringing about a net deficit in the accounts of the Order. Then our real troubles set in.

Nothing will operate more quickly to cause an individual to lose the confidence and respect of his associates than the fact, generally known, that he is in debt. He is branded as unsuccessful; he is criticised for acts considered entirely proper when he was prosperous, and he is the recipient of gratuitous advice ad libitum. People he thought his friends shun him, the best he can expect is degrading pity. The same rule holds true of clubs, of societies, of business. To be in debt is, generally speaking, to be advised, censured and damned.

The Jovian Order is no exception. Wipe out the Jovian deficit, give it a balance in green figures and, although not one present policy or method of accomplishment be changed, the men who are opposing it today will then be the first to shout for it and work for it.

These words are not to be taken as a defense of the Order. The Jovian Order requires no defense before you, or before other men whose support it needs. It is a brass-tack analysis of what has been lacking in our organization and methods; a putting down of the cards face up on the table.

And what an insignificant sum is represented by the deficit in Jovian finances even added to an amount sufficient to put to work its tremendous, unused forces for the benefit of our industry! So small an amount in comparison to the wealth of

(Concluded on page 15)

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PERSONAL POINTERS

TAKE a glance at the record of men,
Incomplete though it is as you may sense,
In the limited scope of your ken
The tides that run hither and hence.
As a watcher there comes to your view,
A glimpse of the fight for success,
Though old as the earth it is new
As the thrills that evolve from its stress.

* * * *

F. L. HUBER, Po. 9460, formerly city representative of the Mohawk Electrical Supply Company, Syracuse, N. Y., has recently been appointed sales engineer of that company.

* * * *

M. S. ORRICK, Po. 5886, has recently resigned as assistant sales manager of the Western Electric Company at San Francisco, to engage in the wholesale paint business at Oakland, Cal.

* * * *

M. A. CURRAN, Po. 5340V, has been appointed assistant manager of the Philadelphia branch of the Western Electric Company. He was formerly manager of the line material department of the company.

* * * *

J. F. OWENS, Po. 19818, vice-president and general manager of the Oklahoma Gas & Electric Company, with headquarters at Oklahoma City, has recently been elected a director of the Oklahoma City Chamber of Commerce.

* * * *

B. W. COWPERTHWAIT, Po. 18387, general manager of the Northern States Power Company, Fairbault, Minn., division, was vice-chairman of the Rice County Liberty Loan Committee, for the Fourth Liberty Loan campaign.

* * * *

RICHARD VAN RAALTE, Po. 6524, has resigned his position in the advertising department of the General Electric Company, Schenectady, N. Y., to accept a position as advertising manager of the Holtzer-Cabot Electric Company, Boston, Mass.

* * * *

A. C. EGART, Po. 13688, chief clerk in the engineering department of the Southwestern Bell Telephone Company at St. Louis, has left the company to join the Red Cross. He is now at San Antonio, Texas, from which point he will be assigned to work in camps near there.

* * * *

W. W. TEMPLIN, Po. 9085, specialty sales manager of the Western Electric Company, New York, has taken up special work in the Government department. W. D. Lindsay, assistant sales manager of the company, has taken charge of the duties formerly performed by Jovian Templin.

* * * *

J. R. (BOB) WALTER, Po. 16611, formerly with the Hamilton-Beach Manufacturing Company, Racine, Wis., is now connected with the sales department of the Bryant Electric Company, with headquarters at 323 West Jackson Blvd., Chicago. He will cover territory in the Middle West and Southwest.

* * * *

W. W. HENRY, Po. 4466, has been promoted to the position of assistant engineer with the Georgia Railway & Power Company. Jovian Henry has been connected with the company for about fifteen years, and for the past several years has acted as special investigator for the engineering department of the company.

* * * *

ROBERT A. BACHMAN, Po. 11869, who, as announced in the last issue of THE JOVIAN, had resigned his position as vice-president and general manager of the Edison Storage Batter Company, West Organe, N. J., has become connected in a executive capacity with the Wright-Martin Aircraft Company Long Island, N. Y.

* * * *

J. A. RYAN, Po. 17211, formerly connected with H. Boker & Co., Inc., New York, has recently severed his connection with that firm, and is one of the partners of the new firm of Champion & Ryan, manufacturers' representatives, with offices at 299 Broadway, New York City.

* * * *

W. H. SELDON, Jr., Po. 5210, president, the Elliott Electric Co., Cleveland, Ohio, announces the removal of his firm from 322-326 Champlain Ave., to 813-815 Superior Ave., N. W. The firm occupies the entire five floors and basement of its new quarters, which is more desirable than the old on account of its convenience, as it is more centrally located.

* * * *

C. L. DAUN, Po. 14739, formerly a member of the firm of the Daun-Crawford Co., Saginaw, Mich., is now connected with the Electrical Machinery Co., distributors for the Howell Electric Motors Co., with headquarters at 200 First National Bank Building, Milwaukee, Wis.

* * * *

R. A. SARA, Po. 6007, has resigned his position as sales manager of the City of Winnipeg Light and Power Department to accept a position with the American Cellulose & Chemical Manufacturing Co., of New York.

* * * *

A. W. CHILDS, Po. 17064, superintendent of sales of the Southern California Edison Company, Los Angeles, Cal., has been elected a member of the advisory committee of the California Co-Operative Electrical Campaign.

* * * *

SAMUEL W. GREENLAND, Po. 6161, general manager of the Fort Wayne & Northern Indiana Traction Company, Fort Wayne, Ind., has been commissioned a major in the chemical branch of the U. S. Army. He is to continue his supervision of power station construction at a Baltimore gas-making plant, a work he has been engaged in since last April.

* * * *

R. N. EARLY, Po. 7527, has severed his connection with the Canadian General Electric Company, at Peterboro, Ont., and is now connected with Electrical Machinery Company, Minneapolis, in the capacity of designing engineer. Jovian Early was formerly connected with the General Electric Company at Schenectady, N. Y., and with the Fairbanks-Morse Electrical Manufacturing Company, Indianapolis.

* * * *

PETER S. KLEES, Po. 413, Fifteenth Mars, sales manager of the Franklin Electric Manufacturing Company, Hartford, Conn., has been elected vice-president of that company. Jovian Klees was born in Lebanon, Pa., January, 1879, and received his early education in that city. He first entered the electrical industry with the American Electric Lamp Company of Philadelphia. He became connected with the Franklin Company about twelve years ago as sales manager. He served as Jovian Congressman for New England during 1916-17, and has been an active member of other organizations, serving on various important committees.

* * * *

HARRY C. BROWN, Po. 8808, has resigned as secretary of the National Association of Electrical Contractors and Dealers and as business manager of the official journal of the organization, The Electrical Contractor-Dealer. Jovian Brown has been secretary of the organization since April, 1917, succeeding George H. Duffield, Po. 4209. Prior to his election as secretary he was connected with the Cruise-Hinds Company, of Syracuse, N. Y., as traveling sales representative. He has not made an announcement of his plans for the future.

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J. W. STICKENY, Po. 15121, until recently general manager of ıe Indiana branch of the Central Union Telephone Company, now a member of the staff of the Nordyke & Mormon Company, Indianapolis, and is head of the employment and welfare epartment of the latter company. Since retiring as general ıanager of the Central Union Company last June, Jovian tickney has been doing special advisory work for the receivers f the company.

* * * *

THOMAS SPOULE, Po. 3747, president-elect of the Pennsylania Electric Association, is in charge of the overhead construcion department of the Philadelphia Electric Company. Jovian poule was born in Philadelphia, and after his graduation from entral Manual Training School he became employed in attern-making. In 1895 he entered the employ of the Brush lectric Company, since merged with the Philadelphia Electric ompany.

* * * *

GEORGE MCD. JOHNS, Po. 9052, who is now serving his hird successive term as secretary-tresurer of the St. Louis ovian League, has recently become connected with W. N. Matthews & Bro., St. Louis, Mo., in the capacity of production manager. For the past several years Jovian Johns has been superintendent of the Fire and Police Telephone and Telegraph System of St. Louis, and is widely known in electrical circles in that city.

* * * *

WILLIAM O. DAHLSTROM, Po. 7366, who for the past three years has been connected with the Inland Electric Company, Chicago, has returned to the Chicago office of the Bryant Electric Company, with which he was connected prior to going with the Inland Company. He will act as field representative in territory west and northwest of Chicago, formerly covered by G. V. W. Ingham, Po. 816, who, as announced in the last issue of THE JOVIAN, has been made Eastern sales manager of the company.

* * * *

W. B. MISER, Po. 8941, manager of the Dumright Division of the Oklahoma Gas & Electric Company, has been commissioned a captain in the engineering corps of the United States Army, and will soon leave for one of the cantonments. Jovian Miser was chairman of the Dumright Military Training Camp Association before receiving his commission. Prior to his connection with the Oklahoma Gas & Electric Company he was general superintendent of the Illinois Traction Company, at Jacksonville, Ill.

C. C. BROWN, Po. 9024, formerly secretary of the Central Telephone & Electric Company, St. Louis, who is now a Captain, and Acting Adjutant of the Headquarters Motor Brigade in France. He has charge of a company of colored troops. Captain Brown, in a recent letter, relates a thrilling airplane battle that he witnessed that took place 2,000 feet above the ground, in which a French aviator brought down the German plane.

CHARLES A. STANLEY, Po. 9690, who for the past five years has had charge of the commercial engineering department of the Kansas Gas & Electric Company, is now general superintendent of the Arkansas Valley Interurban Railway of Wichita, Kan. Jovian Stanley, after graduating from the General Electric expert course, spent ten years in the General Electric shops in charge of railway testing and design. Since then he has served as a railway appraisal engineer, in which capacity he has been connected with a number of electric companies.

Report of Sixteenth Administration

(Continued from page 13)

the electrical industry, to its crying need for just such service as the Jovian Order is prepared to deliver, to the far greater contributions of the industry to much less potent agencies, that it becomes an economic crime to allow it to cripple our progress.

Find some method whereby the Jovian Order can be financed without placing the entire burden upon the active workers in the Order, the funds to be used for the educational, co-operative development work possible, and you will create an instrument that will actually accomplish all and more than has been heretofore only dreamed of in this and other bodies.

Give your officers one-fourth of the income of any similar association supported by the electrical industry, and with the natural strength of the Order in less than two years your membership will pass its previous high-water mark, there will be not less than one hundred and fifty active local leagues, and the Jovian Order will be the greatest ready-to-use instrument for development and protective purposes any great industry has ever known. The power is there if you will develop it. We are not talking theory; we went far enough with pitifully insufficient resources to prove our case and my assertions.

I know, too, that this thing must be done, and in that big way we have in mind, and justified and demanded by the spirit of the times and of our industry, or we must relinquish all hope for the Order.

The Jovian Order must be either powered to accomplish the great potential good within it, or it will be eliminated. Nor you, nor I, nor any man has time to play with it.

I speak, gentlemen, not only to you of Texas and of this Convention, but to Jovians everywhere. Let us build the Jovian Order into the great edifice possible with the materials ready within it, demanded by the splendid tenets upon which it is founded, to ever stand as a monument to the power of co-operation, good-fellowship, and co-ordinated effort within our beloved industry, or, let us wipe it out.

Let us no longer prostitute the great principles for which it stands, not longer torture it with insufficient measures that go not to the root of the evil that has ever bound its hands and sapped its strength; let us give it either glorious life or an honorable burial, and let us do it NOW!

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YOURS FOR THE ASKING

PARTICIPATION IN YOUR ALREADY-PA

WHEN you pay your annual Jovian dues you are entitled to participate in left-in-the-pocket benefit from membership in The Jovian Order, that r rates on insurance can be had from no other source, and by no one but Jovians. On no Jovian Policy is the saving less than 75%, and in some cases it ranges centage of saving.)

Jovian Policies and Com

	Annual Premium	Approximate Annual Saving	Per Cent of Saving
Single Accident Policy	$12.00	$13.00	108
Double Accident Policy	24.00	26.00	108
Single Health Policy	20.00	15.00	75
Double Health Policy	40.00	30.00	75

IN every case, where we have been able to sit down with the individual Jovian and explain this big saving, and make comparison with other insurance, both standard, assessment and traveling men's associations policies, we have succeeded in convincing the interested party of the big value offered him. He instantly became an enthusiastic booster for Jovian Insurance.

It is, of course, impossible to make this personal solicitation of all our membership. However, we are all interested in making our dollars go farther in these troublous times. A line to this office will bring particulars of how to do so in the matter of Insurance.

CLIP AND MAIL THE COUPON

WE are urged to conserve Food and Supplies. Your m and this is the time to make it go twice as far in bu

BEGIN YOUR SAVING T

IF YOU SO DESIRE, DATE YOUR APPLICATION TO TAKE EFFECT WHEN SOME OF YOUR PRESENT INSURANCE EXPIRES—PAY NOT UNTIL YOU RECEIVE THE POLICY.

THE JOVIAN ORD

SYNDICATE TRUST BUILDING SAIN

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JOVIAN INSURANCE
AID-FOR PRIVILEGE

AN UNUSUAL CONDITION

ovian Accident and Health Insurance at net cost. This is a tangible, money-resents a big annual saving for each individual Jovian. These low, net-cost

s high as 108%. (See the attached tabulation, giving cost, saving and per-

inations Now Available:

	Annual Premium	Approximate Annual Saving	Per Cent of Saving
A Single Accident and a Single Health Policy	$32.00	$28.00	87½
A Single Accident and a Double Health Policy	52.00	43.00	82
A Double Accident and a Single Health Policy	44.00	41.00	93
A Double Accident and a Double Health Policy	64.00	56.00	87½

LIVING expenses now cost twice as much as formerly, BUT Jovian Insurance costs only about half as much as other similar protection at any time. In other words, Jovian Insurance cost enables you to cut that item of expense practically in two in the middle, without sacrificing any of the benefits.

Remember, there is no better insurance obtainable, and no other giving complete coverage for anything like the price asked.

TODAY!

ey is in the same boat,
g insurance as formerly.
DAY!

ER

LOUIS

EVERY DOLLAR YOU INVEST IN JOVIAN INSURANCE, RELEASES NEARLY ANOTHER DOLLAR FOR YOUR OTHER PRESSING NEEDS.

SIGN—TEAR OUT—MAIL *NOW!*

THE JOVIAN ORDER

Gentlemen:

Send me complete information relative Jovian Accident and Health Insurance at greatly reduced rates.

(Signed)_____

(Address)_____

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Patriotic Resolution Adopted

Sixteenth Annual Convention

The Jovian Order

We, the Jovians, in convention assembled, mindful of the scope of war aims of the United States, as set forth by President Wilson in his New York address of September 27, 1918, and his previous addresses and statements, and realizing that no such declarations of purposes in regard to the relation of nations to one another has ever been made by any other responsible head of a powerful nation in a time of world crisis, hereby record our full and absolute concurrence in the President's declaration of principles as a basis for a permanent and just peace to be dictated by the United States and its associates to the Central Powers.

We fully realize the enormous burdens of war and the great sacrifices which have been made by our allies, and how much peace would mean at this time, yet civilization and the future welfare and peace of the world demand not a half-way negotiated peace, but instead an unconditional surrender of our enemies; and to obtain which we pledge ourselves, and all we have, unreservedly to the support of the President in the vigorous prosecution of the war to a decisive triumph of the allied arms over the Central Powers, so that the menace of militarism to the peace of the world and the seed of barbarism shall be forever and utterly crushed; carrying to the soil of the Central Powers, leaving thereon as a monument to militarism and Prussianism the scars of battle and destruction; and so that when peace comes it shall be everlasting, and not once more involve the bartering away of the rights of peoples in the interest of dynasties, but shall square with the President's solemn declarations.

RESOLUTIONS COMMITTEE

(Signed)

CHAS. A. NEWNING, Po. 2,
Chairman
A. HARDGRAVES, Po. 20609
J. S. BONNER, Po. 23
M. F. STERETT, Po. 93
H. L. MONROE, Po. 5
J. R. KEARNEY, Po. 659-99V
R. S. WAKEFIELD, Po. 2606

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I SUMMON YOU TO THE COMRADESHIP

THE American Red Cross has just received from its arithmetical experts reports on its physical activities from April 1, 1917, to August 31 of this year. The record shows that during that period the Red Cross shipped 10,140,406 pounds of milk abroad, and 1,134,401 blankets.

Surgical dressings to the number of 231,302,022 were sent "over there;" 10,123,374 knitted articles; 10,637,201 hospital garments; 1,106,877 refugee garments and 8,203,120 packages hospital supplies.

Every month, one million yards of sterilized gauze for dressing wounds is sent to France, together with 10,000 pounds of ether every week.

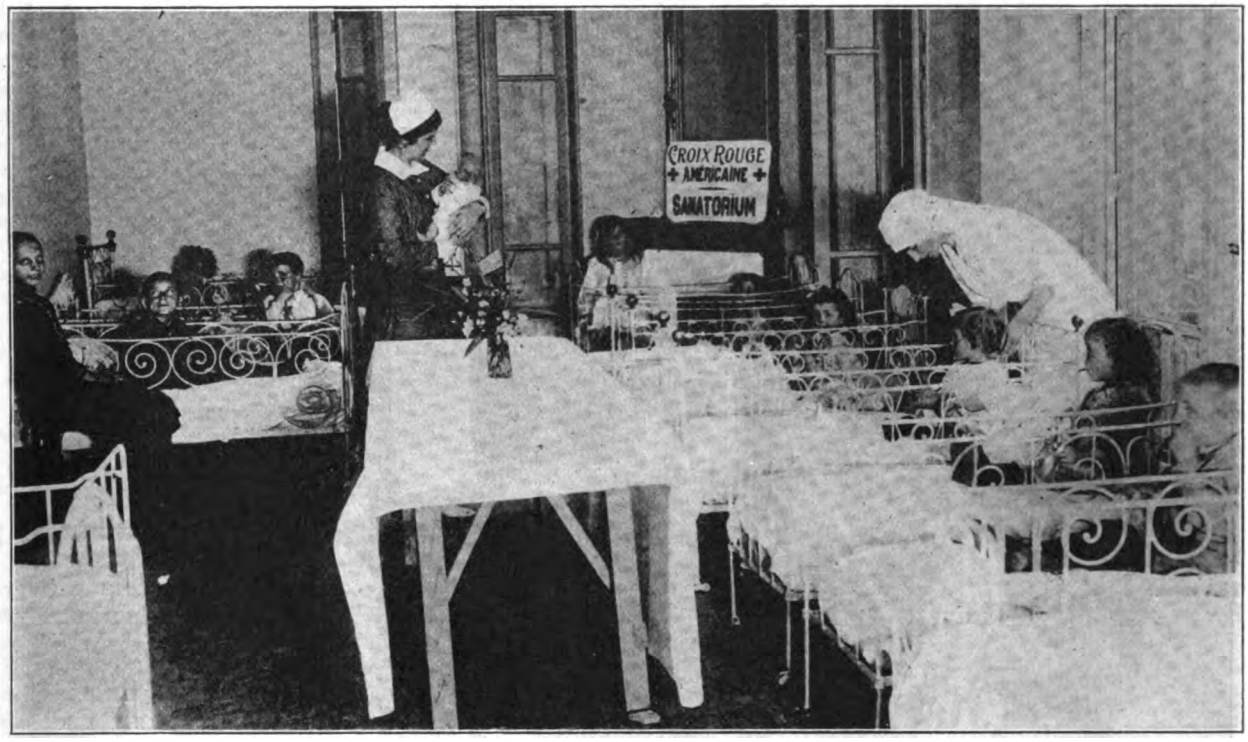
Every month 75,000,000 cigarettes are shipped to France, the same steamships carrying 500 tons of jam every thirty days and 1,500,000 packages of chewing gum.

Rumania, Serbia, Great Britain and other countries is being continued.

Civilian relief has played a large part in the work of the Red Cross. According to best estimates some 5,000,000 American women volunteers are working for the American soldiers. The Red Cross has correlated the work of these volunteers. Millions of sweaters, surgical dressings, etc., have been made by their hands.

In the war zone, volunteers are operating a line of communicating rest rooms, where American soldiers may play, rest, read, or eat, and canteens where hot and cold drinks are served to men going to or coming from the first line trenches.

There is yet another side to Red Cross work. The organization is the only medium of communication between American prisoners in Germany and their folk at home. In addition, the



One of the many children's wards in the American Red Cross Hospital at Lourdes, France. These children are all refugees who have been obliged to flee from their homes in French villages near the front. The little boy, shown in the first bed on the left, became separated from his parents in the flight from the shelled area and the American Red Cross is using every possible agency to bring the family together.

To date the Red Cross has sent 2,689,000 pairs of socks to the war districts and 1,187,000 sweaters. Motor vehicles numbering 4,842 are needed to transport this relief for the needs and pleasure and comfort for our soldiers.

This year the Red Cross will have spent more than $100,000,000. Of this total, more than 70% will be expended in France, which has borne the brunt of the fighting and destruction. Next in importance has been the work in Italy, where some $20,000,000 will have been spent by the end of this year. The need for Italian relief came over night, when the Piave defeat created 500,000 refugees in a single day. Within a week after the Austrian invasion, the Red Cross was in the field with physicians, nurses, ambulances and supplies.

In Russia, despite the chaotic conditions existing there, some $2,500,000 has been spent to good advantage. At present the Red Cross is sending supplies to both Archangel and Vladivostok for use of the Allied armies, in which are included, of course, the Czecho-Slovak forces. Relief work in Belgium, Red Cross, at the request of the Government, feeds these prisoners, each man receiving twenty pounds of sustenance weekly. This work is done through the Bureau of Prisoners' Relief. The bureau concerns itself with supplying prisoners with food and clothing; correspondence with families of prisoners, etc.

Red Cross canteens go to the communicating trenches, right under enemy fire, where soldiers passing in or out, receive their quota of hot soup or coffee in winter and cold drinks in summer. At railroad junctions are stationary canteens, where meals are served, baths are obtainable and where cootie-infected clothing is disinfected.

Refreshment units under the supervision of the canteen service have been established in all important Red Cross chapters in the United States. Of 3,863 Red Cross chapters on August 1, more than 1,000 had refreshment units which furnished edibles to soldiers passing through towns and cities on their way to cantonments or to embarkation points. In addition to these chapters, there were approximately 16,000 branches and auxiliaries to the number of 30,000.

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Such, in brief, is the work of the American Red Cross. During the week of December 16 to 23 the third annual roll call of the American Red Cross will seek to enlist under its banner every American man, woman or child. The roll call of last year brought a total of 22,000,000 to the roster. This year's call will be in reply to the summons of President Wilson, when he said:

"I SUMMON YOU TO THE COMRADESHIP."

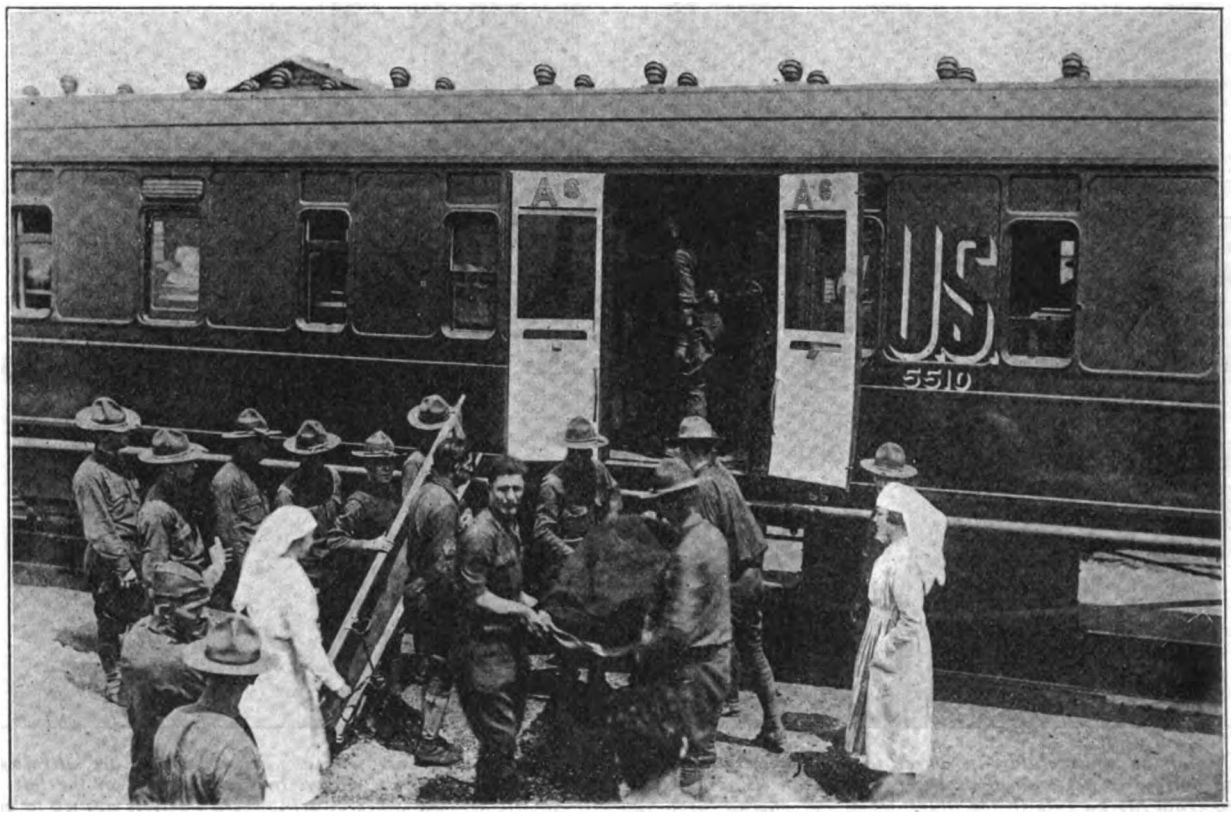
Henry P. Davison, chairman of the War Council of the American Red Cross, in his statement announcing the roll call, said:

"This year, both as a Christmas observance and as a renewal of the Nation-wide pledge of loyalty, the Red Cross will again put before everyone the duty of standing by the flag, for the Red Cross in this great fight for peace represents the whole spirit of that for which we are fighting. This will not be a call for money. It will be a summons to every American to line up for the American ideal. We cannot all fight, but this one thing we can all do."

The Home Service Section of the Red Cross, too, has dor valuable work. It concerns itself with the welfare of the famili of men in service, both in our army and in those of our allie The section is composed largely of volunteers and has a membe ship as representative as possible of the various local interest It lends temporary financial relief when there is an emergenc and personal service to the returned soldier or sailor.

The Camp Service Section of the American Red Cro renders emergency aid, and distributes needed articles at trainir camps, cantonments and naval stations. Red Cross warehous are maintained at military bases, where distribution takes plac

Still another phase of Red Cross activity is in the recruitir of nurses for the army. There are no Red Cross nurses, such a are popularly pictured. The Red Cross recruits them for tl army. The moment they enter the service, they become arm nurses, and the Red Cross has no supervision over them, unle it be to aid them in their duties of mercy. Up to August the Red Cross had enrolled about 14,000 such nurses. It stated on authority of the Surgeon-General's office that anoth 11,000 nurses will be needed before the end of the year.



When a trainload of American wounded on its way to the rear stops at a station, workers from an American Red Cross can are always found waiting to supply coffee, sandwiches and cigarettes to the men who can avail themselves of the offer. The above sh an American Red Cross canteen at Issoudun, France.

ENGLISH MUNITION WORKERS PRODUCE FOOD

ONE of the great munition works in the Midlands of England has achieved remarkable success in the cultivation of the waste land surrounding the factory buildings and sheds. This land, which previous to the war would have been neglected as waste and unsightly with refuse heaps, by means of an intensive system of cultivation is producing great quantities of potatoes and all kinds of vegetables, which fully supply the requirements of thousands of work-people. This season pig and poultry rearing and breeding have widened the scope of the scheme, and immensely added to its food-producing value. One hundred acres are under cultivation, and it is expected that the factory will be entirely self-supporting as regards vegetables. As the employees number about 12,000 people, a great saving of foodstuffs is secured.

AMERICANS BUILD HUGE REFRIGE ATING PLANT IN FRANCE

A RECENT issue of Le Matin, the Parisian newspa gives an interesting example of characteristic Amer energy and speed. In a certain spot in Central Fra where last December stood a thick forest there has sprung under the hands of American engineers and workmen, a h meat-refrigerating plant. The encampment, which has for special object the provisioning of American soldiers in Fra covers a space of 10,000 acres. The refrigerating plant h 10,400,000 pounds of meat, which is equivalent to 15,000 c weighing on the average 700 pounds apiece. It produces tons of ice per day in excess of that used at the plant, w is used in the transportation of meat in the refrigerator and also for the conservation of other perishable foodst especially margarine.

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News of the Jovian Leagues

Wilmington, Del. The annual meeting of the Wilmington, Delaware, Jovian League was held October 1, and practically the entire session was devoted to the election of officers for the ensuing year. The following officers were elected:

President, W. A. Dannehauer, Po. 20019, sales agent, Wilmington, Philadelphia Traction Company; vice-president, R. S. Glover, Po. 20022, secretary, Garrett & Miller Company; secretary-treasurer, C. T. Bridgham, Po. 20638, office manager, Newcastle Leather Company; first tribune, O. T. Hall, Po. 9165, superintendent electrical construction American Railways Company; second tribune, A. T. Throop, Po. 20036, general superintendent, Wilmington & Philadelphia Traction Company.

Chicago Sergt. William S. Bishop, of Battery C, 149th Artillery, was the speaker at the Chicago luncheon meeting September 19. Besides bringing first-hand news of Chicago boys at the front, Sergeant Bishop made one of the most interesting and inspiring addresses the League members have had the good fortune to listen to recently.

On September 26, Prof. John A. Scott, of Northwestern University, made a remarkably interesting address, in which he explained many features of the war tangle of the East, concerning Mesopotamia and Balkan countries. He showed clearly how the Kaiser's plans for the Berlin-to-Bagdad Railway entangled him in the present mesh.

Sergt. Gerald A. Paul, member of Lord Strathcona's Horse (R. C.) Canadian Cavalry Brigade, addressed the members of the League October 3. He served on the Western front for three years, and was discharged after being wounded several times.

On account of the influenza, meetings of the League were discontinued temporarily.

Cleveland Meetings of the Cleveland League were temporarily suspended, on account of the prevalence of Spanish influenza.

St. Louis The St. Louis Jovian League held an inspirational meeting to promote the sale of Fourth Liberty Loan Bonds, October 1. It was reported that 98 per cent of the League's members were actively engaged as Liberty Bond salesmen.

J. W. Day, pastor of the Church of the Messiah, who has been engaged in war work, was the speaker of the day, taking for his subject, "The Morale of the American Citizen."

Harry B. Marshall, Po. 9637, led the singing, assisted by his wife and Mrs. Carl Luyties. The meeting proved to be one of the most enthusiastic held by the League this season.

Meetings of the League have been temporarily discontinued on account of the influenza.

New York One hundred and fifty members of the New York Jovian League, lunching at the Hotel McAlpin Winter Garden, dug a little deeper in support of the Fourth Liberty Loan than they thought possible, and extracted nearly $30,000 in less than thirty minutes. Inspiring talks were given by Congressman Charles P. Caldwell, of New York; Lieut. John Quinney, of the Canadian Mounted Rifles; Theodore Beran, J. M. Wakeman, president of the Society for Electrical Development, who presided, and T. C. Martin.

Congressman Caldwell said that it would cost at least one hundred billions before our proposed army of 5,000,000 was placed in France and maintained there until the Prussian menace was ended. "We want six billion now, and we're going to get it," he declared. "The cost of liberty is high, but, whatever the cost, it's little enough to pay. If you don't subscribe the money needed, we'll take it from you in taxes, and you won't get it back. When you subscribe it in bonds you get it back with interest. The faith and credit of America are pledged to this fight for liberty and as long as there is a dollar in the United States we shall back our boys over there to the full."

Lieut. Quinney, with a record of twenty-eight years in military service, was with the Canadian Mounted Rifles at Vimy Ridge and Messines, and was twice wounded. "God's whitest manhood is to be found in the trenches," he said, and after describing some Hun outrages of which he had seen the proofs, he told of his brigade's fight at Ypres, when lacking any guns save a few three-inch pieces, they had withstood a terrific Hun bombardment followed by an attack that came in twelve waves. While standing on their fourth line of defense, determined to fight to the last man, a German shell unearthed two Lewis guns, which were intact, and with these his men made the Huns believe the Candians were in force. Out of 600 men, only three sergeants, four corporals and eighty-six privates survived the battle, and all but sixty-one were wounded.

"If you lend one-hundredth the way your boys fight over there," said Lieut. Quinney, "the Allies will be in Berlin before you know it."

* * * *

KANSAS CITY ELECTS W. M. HAND PRESIDENT; OTHER OFFICERS ELECTED AND REPORT OF ANNUAL MEETING

At the annual meeting of the Kansas City Jovian League held at the Baltimore Hotel in that city October 1, plans for an aggressive campaign for the coming year were outlined and adopted.

The meeting was well attended, and a number of visitors were present, among whom were: L. O. Ripley, Po. 7042V, Wichita, Kan., candidate for Jupiter of the Jovian Order; Mr. Van Deest, Denver, Colo., and W. A. Wadsworth, Po. 7042V, Wichita, Kan.

The matter of the League's participation in the Fourth Liberty Loan campaign was considered, and it was authorized to notify all members of the League by mail to aid in every way possible to facilitate the work of the Liberty Bond salesmen.

A request was presented from the headquarters of Jupiter at Dallas urging the League to elect and send delegates to the Annual Convention. On motion being approved, President Denton appointed a committee to select delegates to represent the League.

The reports of the secretary-treasurer and the president were then presented and approved; following which the report of the nominating committee was presented, acted upon, and the following officers were elected for the ensuing year:

President, W. M. Hand, Po. 795; first vice-president, J. E. Lauder, Po. 843; second vice-president, W. B. Satterlee, Po. 16579; third vice-president, F. F. Rossman, Po. 2468; fourth vice-president, H. C. Blackwell, Po. 3957; secretary-treasurer, J. D. Todd, Po. 7968.

Executive Committee: A. P. Denton, Po. 1415V; F. M. Bernardin, Po. 250-7; Sam Furst, Po. 3215, and P. J. Kealy, Po. 16571.

Following announcement of the result of the election, President-elect Hand addressed the meeting with a brief outline of what would be attempted in the way of constructive achievement during his administration, and alluded to the possibilities of the organization to be of a great benefit to the local industry.

The question of meetings was then taken up, and after considerable discussion it was decided to continue holding semi-monthly meetings.

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The Return Circuit

Edited by W. R. Joyes, Po. 13813

Your Hour

By W. R. J.

SOME day this war will end,
The cannons cease,
And in the years to come—
The years of peace—
There will be joy for you
If you can feel
Upon your acts just one
Approving seal—
One thought that will outweigh
All of the rest
And bring this great content:
"I did my best."

While the dark pall of gloom
Hangs over earth,
In its travail to give
A new life birth,
There lies a chance for you,
No matter where
Your lot in life may be,
To do your share.
Can you do less than this,
While others give
Their lives to right the world
Wherein you live?

This is a debt you owe,
The time to pay
Will never more return—
It is today.
The gold of years to come
May be as bright,
And time may bring to you
A greater might,
But then 'twill be too late—
This is the hour—
Throw in the scales your toil,
Your wealth, your power.

* * * *

EXPERIMENTS

A Description of One that Failed, by the Squire

INVENTIONS are funny things. There is always something bein' got up around Piney to save labor or somethin', an' I reckon I've got more laffin' out of them than you could get out of a four-ring circus full of clowns.

Take that contraption that Pete Brunns, the blacksmith, got up for milkin' cows. Just to look at it it was sure a fine piece of machinery, an' it was worth all of a dollar to hear Pete tell how it worked.

He kept it right in his shop, an' I don't reckon there was a person in the whole of Hackberry County that didn't know all about it an' how it was goin' to revolutionize the milkin' business of the world an' maybe some foreign parts besides.

The real laffin' part didn't come off, though, till Pete went to try it out on Sam Wick's cow. Not havin' a cow of his own, he had prevailed on Sam to let him try it out on his.

"Blaze," as Sam called her, was a rather wild lookin' short horn, an' there was somethin' dubious in the manner in which she regarded the crowd that came out to watch Pete try his invention.

I read where a philosopher said one time that: "Reverses come to some people unexpectedly and others are always looking for them." Part of the crowd followed Pete into the lot a stood around him while he fastened that contraption on, a part of them hung back near the fence.

The cow didn't appear to mind it a bit while Pete buckl the machine on. She just stood still and chewed her cud as explained the fine points of the thing to the crowd. The or time she moved was to glance around suspiciously as he push the milk pail under it an' sat down on the stool.

Pete's milkin' apparatus was worked with a lever someth like a pump handle. When you pushed down on it, it squeez all four of the sources of milk at the same time, an' when y pushed it up it released them.

Pete never discovered if it worked further than the downwa stroke.

Simultaneously as he came down on the handle the c humped up in the back, an' gave vent to a moo-o-o-oo th seemed to express astonishment, indignation, pain and co tempt in one vibration.

Then, accordin' to the way Bill Stacker told it afterwar "she pulled the hump out of her back with her hind legs a slapped Pete in the chest with the three-legged stool an' t milk pail."

Then she started to jumpin' stiff-legged, an', accordin' Bill, "to articulatin' vehemently."

Bill said he'd never had a desire to know the cow langua until then, but he'd be willin' to do without eatin' for a we to know what she was sayin' when she lowered her head a made at the crowd.

Those that were near the fence didn't have either the exci ment or the exercise that those did who were near Pete.

While she was tossin' a couple of the curious spectat over the fence, Pete untangled himself from the three-legg stool, picked the milk pail out of the bosom of his shirt a climbed a cherry tree.

The incident connected with the experiment was closed wh Sam an' a few neighbors finally got the contraption off of t cow, helped Pete down out of the tree an' several applicati of arnicy eventually took the soreness out of his chest.

* * * *

Goat Getting

By W. R. J.

THE glitter and gilt of a gaudy array
Lead folks with their impulses sadly astray;
They herald the famous with cheers and salutes,
And spawn on the rich like a bunch of galoots,
They cringe at a word from the mighty and high,
And crowd to get near when the wealthy pass by.

To use simple parlance, they act just like rubes,
And those whom they flatter consider them boobs.
Yet many a man in his course has gone wrong
Because of the plaudits he got from the throng.

McDuffer, the actor, gets swelled in the head
Because of the special attention he's fed;
DeMoney, the magnate, becomes quite austere,
Obsessed with the notion he owns the whole sphere,
While Vote 'Em, the statesman, borne up by the tide,
Develops an arrogant growth to his pride.

When these men consider the world in their grip
It's dollars to doughnuts they've started to slip,
For the fall of the great, as a rule you may note,
Results from the cheering that captured his "goat."
The records may show it was money or fame
That caused him to weaken and lose in the game,
But seek the angoras wherever they stray
And you'll find that the spawners have led them away.

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OBITUARY

Frank E. Watts, Po. 1509-47, Past Jupiter Eleven, is receiving the sympathy of his thousands of friends in the electrical industry upon the death of his wife. Mrs. Watts was a woman of most charming personality and unusual accomplishment. Those friends of Jovian Watts who were privileged to have known him in his home life will particularly understand what an irreparable loss is his. The news of the decease of Mrs. Watts was telegraphed to the Jovian Annual Convention at Dallas, where an appropriate and most sincere resolution of condolence was adopted, spread upon the minutes and a copy forwarded to Jovian Watts.

* * * *

Jonathan Camp, P. O. 1362, president and general manager of the Franklin Electric Company, Hartford, Conn., died at his home in that city on October 13, from an attack of Spanish influenza. He was ill only one week, and developed pneumonia within three days after contracting the disease. Jovian Camp was born in Norfolk, Va., January 10, 1874, and received his education at Williams College. He first started his career in the hardware business at Hartford, but later became connected with the Perkins Electrical Switch Company, of Bridgeport, Conn. A few years ago he, in connection with C. I. Hills, purchased the lamp manufacturing business of the Perkins Electric Switch Company and formed the Franklin Electric Manufacturing Company. Following the death of Mr. Hills, Jovian Camp became president of the company.

* * * *

B. M. Downs, Po. 2508, Statesman-at-Large, who for the past several years has been connected with the Hemingray Glass Company, died at his home at Clinton, Kentucky, October 29, from an attack of apoplexy, after an illness lasting but a few hours. Jovian Downs was widely known in the electrical industry, and numbered his friends by the hundreds in all sections of the country. He was a loyal and enthusiastic Jovian and had been active in promoting the welfare of the Order since his initiation in New York in 1909. Prior to his connection with the Hemingray Glass Company he was for a number of years vice-president of the Brookfield Glass Company, New York, and in that connection gained a wide acquaintance in the East, especially the New England States. Possessed of a friendly and pleasing personality, to know him was to like him and to wish for his friendship. To this trait of congeniality may be attributed much of his success, both in business and in his work in connection with the organizations with which he was affiliated. He was one of the most lovable characters ever identified with the industry, and his untimely death comes as a great shock to the thousands who knew him.

* * * *

Harry L. Gannett, Po. 12250, who for more than thirty years has been connected with the Commonwealth Edison Company of Chicago, passed away September 24 after a brief illness of a few weeks. He was 51 years of age, having been born January 15, 1867. Starting his career with the Western Edison Light Company in 1886, he had a long and varied career in the electrical industry. In 1893 he became foreman of construction and repairs, and later was appointed assistant superintendent of construction. For the past five years he had given most of his time to the safety organization of the company, and under his direction the proportion of accidents was reduced to a marked degree. In 1914 the American Museum of Safety awarded a gold medal to the Commonwealth Edison Company for its achievement in the work of safety among its employes, as a result of the efforts of the safety committee of which Jovian Gannett was a member. He is survived by his wife and two sons, Homer and Winfield, the latter now with the American Army in France, and a sister, Mrs. Thomas Severn, to whom we extend the sympathy and condolences of the Fraternity.

Henry F. Rosenow, Po. 2140, member of the firm of Skinner Bros., St. Louis, Mo., died at his home in that city October 18, of Spanish influenza, after a brief illness. Jovian Rosenow was forty-eight years of age and had been an active member of the Order since his initiation, May 8, 1909. He was formerly chief engineer for the Brown Shoe Company, and was well known in St. Louis. He leaves a wife and five children, to whom The Jovian extends the sympathy and condolences of the Order.

* * * *

OUR MERCHANT MARINE YESTERDAY

In other days Yankee ships and sailors were able to win the commerce of the world against competition because of native enterprise, brains, and seamanship.

They were enormously hampered by numberless tonnage, customs, and neutrality regulations. There were the risks of the sea, of uncharted, unlighted coasts and reefs and islands, and a plague of ferocious pirates and lawless privateers who haunted the trade routes from the Spanish Main to Madagascar.

Notwithstanding all these grievous handicaps, American ships and sailors prospered and multiplied, nor did they stay at home and whine that they could not compete with the more favored merchant navies of England and the Continent. They took and held their commanding share of the world's trade, because they had to have it. They wanted it earnestly enough to go out and get it.

Whenever the United States shall really desire to regain her proud place among the maritime nations the minds of her captains of industry will find a way to achieve it and her legislators will solve their share of the problem.—Ralph D. Paine, "The Ships and Sailors of Old Salem."

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NORWEGIAN GOVERNMENT GOES WHALING

THE Norwegian Government whaling vessels have caught over one hundred whales since the prohibition against whaling was raised a short time ago. Ninety-four of them were taken to a whaling station near Bergen, which has been working for three months. It is calculated that the whaling will continue for six months, and that with five stations and seventeen ships it should be possible to catch five hundred whales every year. One whale yields an average of thirty barrels of whale oil, or from five to five and one-half tons of fat. The fat is used to a great extent in making margarine.

* * * *

SUGAR NEWS FROM LOUISIANA

THE Louisiana sugar producers are now being called upon to vote upon an agreement recently reached that the United States Food Administration govern the handling of the oncoming sugar crop. Plantation granulated takes the same price as refiners' granulated, and other grades fixed and to be fixed take stated differentials, ranging downward from 10 cents to $1.20 per hundredweight. Daily reports of production and grades are to be made. The Government is to direct efficient distribution, aid in securing transportation, induce local refineries to handle Louisiana raws and furnish other safeguards. The maximum price is to rule, the Army and Navy are to have preference; but if beet or other sugar sells above the maximum, Louisiana is open to the same privilege. The deals for Cuban and beet sugars are to determine the Louisiana price.

The supposition is that Louisiana raws will command something considerably over the 6.35 cents allowed last season, although the sugar-control committee, headed by Judge R. E. Milling, will continue to present the special claims of the Louisiana industry to higher prices than so far indicated, so as to encourage its preservation as a national asset and insurance policy.

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OUR GOLD RESERVE AND OUR MERCHANT SHIPS

By William C. Redfield, Secretary of Commerce

ONE vital factor of the readjustment period brought by peace will be our foreign trade. It was valuable before the war; it will be esssential after it. This country has the greatest unexhausted supply of credit in the world. The mechanism which makes this credit effective is our gold reserve. Perhaps it would be more accurate to say that our banking system is the mechanism and the gold reserve is the foundation upon which the whole credit system rests. The whole credit-making power of the country depends upon the gold reserve. If this is seriously depleted, our ability to give credit is by so much reduced.

This is a severely practical matter, because the smallest bank in the smallest village will find itself unable to lend to the butcher, the baker, or the candlestick maker his modest requirements if our gold reserve is very seriously depleted.

How, then, may we protect this reserve against too great reduction?

There are four ways by which, according to my mind, this reserve can be maintained. These are by sales abroad, by loans abroad, by investments abroad, and by services abroad.

We may render services abroad by our ships, by insurance of various kinds, and in similar ways. We should make investments abroad in order that the normal business arising from the use of those investments may flow to us and that the earnings upon the investments may be returned to us also. We must make loans abroad in order that others may prosper, that we may through their prosperity gain better customers, and that we may receive the interest upon our loans. And we must make sales abroad that our materials and labor may find a market, that our workmen may be employed, our capital receive its due income, that our necessary taxes may be paid, and that we may ourselves receive in return the supplies that we need from other lands.

Clearly our domestic trade will depend in a large measure upon our foreign trade. We must be susbstantially sufficient to ourselves in the coming days as regards the supply of credit. It is evident that commercial operations even in wartime should be conducted with due thought of the future and solicitous memory of the truth that we may not so far injure by war restrictions the commerce of the country that it shall be unable to take up promptly the work of peace when the war closes.

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ELECTRICAL PUBLICATIONS

ELECTRICAL BLUE BOOK. Eighth Edition, 1918. Chicago: International Trade Press, Inc. Cloth, 274 pages (9x12 in.), illustrated. Supplied by International Trade Press, Inc., Chicago, for $2.

Earlier editions of the ELECTRICAL BLUE BOOK have marked it as the reference book of the electrical industry for approved construction methods and materials. The present edition has therefore been looked forward to with considerable interest because, as usual, it includes the latest edition of the National Electrical Code, with explanatory notes, and covering the revision of these important rules completed only a few months ago, besides a complete listing of inspected and approved electrical appliances; also other information of value to the buyers of electrical material.

The 1918 edition is composed of three principal parts, of which the first consists of some 150 pages of catalog exhibits of approved electrical fittings and appliances as produced by the leading electrical manufacturers. All these pages are well illustrated so as to give the reader an excellent idea of the products described. Both alphabetical and classified indexes aid in quickly finding producer or equipment desired.

In the second part is given an outline of the Underwriters Laboratories Inspection Service, together with the list of th branch offices and stations, and followed by the complet latest list of inspected electrical appliances and material.

The third part consists of the complete National Electric Code, 1918 edition, which is the first appearance of this late Code with all the revisions indicated. This is done in this ca by printing the new rules or changed parts of old rules in bol faced type, so that all interested in the changes may know ju what they are. This is of great value to all electrical engineer contractors and inspectors, who must keep informed on th latest regulations covering construction practice. To pic out all the changes in the nearly 100 rules with their man sections is a laborious task which has been saved by the carefu editing of the rules in the BLUE BOOK. This has also include the correction of numerous typographical errors, both in th rules and index appearing in the little booklet containing th Code as published by the National Board of Fire Underwriter Moreover, the absence of much needed explanatory notes i this booklet has been met in the BLUE BOOK by fairly copiou notes, most of which are new. Quite a number of illustration also help make clear the meaning of the rules. This part the BLUE BOOK alone makes it invaluable to all interested the best electrical construction practice.

Additional matter appearing in the book is a list of the mem bers of the Electrical Supply Jobbers' Association, the nation organization of this branch of the industry; a general directo of electrical associations; and a complete buyers' guide electrical apparatus and material.

All told, the new BLUE BOOK contains a mass of ready refe ence information for the buyer, installer and inspector of ele trical construction material and appliances. No effort h apparently been spared to make this information as up-to-da and authentic as possible. The publishers are to be congrat lated, therefore, on getting out under the stress of the mo serious war conditions this excellent edition of the ELECTRIC BLUE BOOK at a price no greater than earlier and less comple editions.

BERNARD J. DILLON.

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OUR EXPORTATION OF SILVER

THE melting down of the silver dollars in the United Stat Treasury and the exportation of the bar silver resulti and other silver bullion possess great interest to the avera American citizen.

Most of this silver bullion is sent to India, whose people ha a strong prejudice in favor of metal money, and India is expo ing a vast amount of material used in the war by Engla and France, and, in fact, all the entente allies, includiig o selves.

To pay for these goods in the money desired by the peo of India caused a tremendous drain on the supply of silver entente allies, and to meet this urgent demand the Uni States has taken the great amount of silver bullion and sil dollars lying idle in its Treasury and is exporting it to In to be used in paying for war supplies. Something like a hundr million silver dollars have been melted down and exported.

What great assistance it was to the allies, including United States, is shown by the statement of Sir James Mest financial member of the Viceroy's Council, who is reported saying:

"Probably few people in America realize how vitally imp tant to India and to India's share in the war was the legislat passed in Washington releasing large quantities of silver use in alleviating the currency situation there. For this act India as well as the British Empire and the allies owe a d of gratitude to the United States which it is hard to overstat

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JOVIAN LEAGUE DIRECTORY

TO INSURE the accuracy of this Directory, Statesmen, Tribunes and other Jovian officers are urgently requested to give the Central Offices prompt notice of every change in the dates and places of meetings of Leagues already established, and to furnish full information whenever new Leagues are organized.

AKRON—Business meetings and luncheons at president's call. Secretary, V. W. Shear, Po. 14399, 323 Ohio Building.

BENTON HARBOR—Second Tuesday of each month, at place determined by members. Secretary, R. J. Hadlow, Po. 15530, care Electric Service Co.

BUFFALO—Saturday, 12:30 p. m., Lafayette Hotel. Chairman, Edmond D. McCarthy, Po. 589-10, 41 East Eagle Street.

CHATTANOOGA—Wednesday, 12:00 m., Read House. Chairman, Howell Graham, Po. 13244, care Majestic Theater.

CHICAGO—Tuesday, 12:15 p. m., Hotel Sherman. Secretary, W. H. Hodge, 1900 Continental & Commercial Bank Building.

CINCINNATI—Monday, 12:15 p. m., McAlpin's Restaurant. Secretary, Joseph C. Bowman, Po. 6275, care H. W. Johns-Manville Company.

CLEVELAND—Regular meeting, Thursday, 12:00 m., Hotel Statler. Club rooms open from 8:30 a. m. to 11:00 p. m. Secretary, Lucille J. Darrah. Hotel Statler.

COLUMBUS—Every other Tuesday, 6:00 p. m. and 12:00 m., alternately, at different hotels. Secretary, O. W. Rhoades, Po. 12702, care Columbus Railway, Power & Light Company.

DALLAS—First and third Mondays, Hotel Adolphus, 12:15 p. m. Secretary, H. S. Cooper, Po. 365, Slaughter Building.

DAYTON—First and third Mondays of each month, 12:00 m., Miami Hotel. Secretary, O. E. Howland, Po. 17127, care Dayton Power & Light Company.

DENVER—Second and fourth Wednesdays, 12:15 p. m., Kenmark Hotel. Secretary, T. B. Burnite, Po. 3426V, 523 Boston Building.

EAU CLAIRE—First Monday each month. Secretary, E. C. Dearth, Po. 17144V, care Wisconsin & Minnesota Light & Power Company.

FORT WAYNE—Fifteenth day of each month (hour selected by president), Wayne Hotel. Secretary, J. W. Grodrain, Po. 14758, 3124 Hanna Street.

FORT WILLIAM—Monthly, alternately at Avenue, Fort William, Mariaggi and Port Arthur Hotels. Secretary, H. E. Stafford, Po. 13232, care Mahon Bros. Electric Company.

GALVESTON—Luncheon meeting fourth Tuesday each month. Secretary, F. G. Cassara, Po. 20343, care Southwestern Telephone and Telegraph Company.

GRAND RAPIDS—First Saturday of each month, 12:15 p. m., Association of Commerce. Secretary, B. H. Vandermass, Po. 16484, care Consumers Power Company.

HARRISBURG (PA.)—Secretary, C. P. Williams, Po. 18881, care Bell Telephone Company.

HOUSTON (TEX.)—Date later. Rice Hotel. Secretary, R. S. Daunoy, Po. 20073, care Houston Lighting & Power Co.

INDIANAPOLIS—Monday, 12:15 p. m. Secretary, A. H. Smith, Po. 13580, care Ford Motor Car Company, 1315 East Washington Street.

KANSAS CITY—Third Friday each month, 12:15 p. m., Hotel Muehlebach. Secretary, T. R. Harber, Po. 18908, 1500 Grand Avenue.

LA CROSSE—First Thursday each month, Elks Club, 6:00 p. m. Secretary, Dan J. Whalen, Po. 16022, care Thill-Manning-Whalen Company.

LITTLE ROCK—Second and last Fridays of each month, 6:30 p. m., Elks Club. Secretary, Arthur E. Smith, Po. 13920, care Little Rock Railway & Light Company.

LOS ANGELES—Wednesday, 12:00 m., Jahnke's Tavern, 534 South Spring Street. Secretary, Clifton Peters, Po. 12734, 108 Edison Building.

LOUISVILLE—Tuesday, 12:15 p. m., Hotel Henry Watterson. S. B. Storm, Po. 9781, care General Electric Company.

MANSFIELD—Date and place of meeting from Secretary, H. A. Waite, Po. 16625, care Federal Sign System.

MEADVILLE—Tuesdays, 12:30 p. m., Kepler Hotel. Secretary, W. R. Murphy, Po. 14021, care Meadville Telephone Company.

MILWAUKEE—Second Tuesday each month, Hotel Plankington. Secretary, F. V. Ziekursch, Po. 16625, 436 Public Service Building.

MINNEAPOLIS—First and second Wednesday each month, Elks Club, Second Avenue and Seventh Street. Secretary, Norman O'Neill, Po. 18425, care General Electric Company, 15 South Fifth Street.

MUSKOGEE—Secretary, F. H. Neber, Po. 19815, care Peabody Electric Company.

NASHVILLE—First and third Saturdays of each month, 12:30 p. m., Tulane Hotel. Secretary, C. P. Cochran, Po. 15212, City Hall.

NEWARK—(Date and place of meetings to be given later). Chairman, H. C. Heidrick, Po. 14439, care Electric Repair & Motor Company.

NEW ORLEANS—Second and fourth Tuesdays of each month, 12:05 p. m., Hotel De Soto. W. E. Clement, Po. 2557, 201 Baronne Street, New Orleans, La.

NEW YORK—Place and date of meeting from Secretary, F. M. Feiker, Po. 17197, care Electrical World, Tenth Avenue and Thirty-sixth Street.

OKLAHOMA CITY—Monday, 12:15 p. m., Lee Huckins Hotel. Secretary, A. L. Mullergren, Po. 18853, care Berham Engineering Company.

PEORIA—First and third Saturdays of each month, 1:00 p. m., Jefferson Hotel. Secretary, F. S. Simms, Po. 13385, care Avery & Company.

PHILADELPHIA—Thursday, 12:30 p. m., Hotel Adelphia. Secretary, L. R. Browne, Po. 14654, 131 Nippon Street.

PITTSBURGH—Thursday, 12:15 p. m., Fort Pitt Hotel. Secretary, R. Gray Jones, Po. 16094, care Cutter-Hammer Company.

PITTSFIELD—First Saturday of each month, 6:30 p. m., Wendell Hotel, and informal luncheon and conference every Wednesday at General Electric Company's Restaurant, Kellog Street. Secretary, J. O. Roser, Po. 10412, care General Electric Company.

RICHMOND—Third Wednesday of each month, Business Men's Club. Secretary, L. E. Walker, Po. 6610, care Western Electric Company.

ROCHESTER—Thursday, 12:15 p. m., Hotel Seneca. Secretary, George R. Bellis, Po. 16129, care Rochester Railway & Light Company.

SACRAMENTO—Saturday, 12:00 m., Quaker Cafeteria. Secretary, A. E. Brockway, Po. 6039, 3431 Sacto Avenue.

SAN ANTONIO—Every Tuesday, 12:30 p. m., different hotels. Secretary, H. G. Wharton, Po. 6653, care H. G. Schuwirth Company.

SAN FRANCISCO—Wednesday, 12:15 p. m., Room C, Palace Hotel. Secretary, J. W. Redpath, Po. 7739, 505 Rialto Building.

SPOKANE—First and third Wednesdays of each month, 12:00 m., Davenport's Hotel. Secretary, R. S. Daniels, Po. 11104, care Washington Water Power Company.

STARK COUNTY—Secretary, R. E. Lane, Po. 8422, care the Central Power Company, Canton, Ohio.

ST. LOUIS—Tuesday, 12:15 p. m., American Annex Hotel. Secretary, Geo. McD. Johns, Po. 9052, Room 401, City Hall.

ST. JOSEPH, MO.—Secretary, .W R. Thomas, Po. 1489, care American Electric Company.

TULSA, OKLA.—Monday, 12:00 m. to 12:30 p. m., Tulsa Hotel. Secretary, P. G. Walker, Po. 6871, 18 West Third Street.

WASHINGTON—Wednesday, 12:30 p. m., Commercial Club. Secretary, C. B. Mirick, Po. 1722, care National Electric Supply Company.

WATERTOWN (WIS.)—7:00 p. m., last Thursday each month, New Commercial Hotel. Secretary, H. J. Hippler, Po. 20007, care Wisconsin Gas & Electric Company.

WICHITA—First and third Mondays of each month, 12:00 m., Wichita Club. Secretary, Homer S. Fox, Po. 17868, care Southwestern Electric Company.

WINNIPEG—Every other Thursday, 12:15 p. m., Fort Garry Hotel. Secretary, C. T. Kummen, Po. 15957, 386 Donald Street.

* * * *

Brotherhood Involves Personal Relations

"Brotherhood implies, yes, involves, personal relations between men. It is difficult to have a fraternal feeling for the brother in blood whom you have never seen, but easy to develop a brotherly attitude toward the man with whom you are in frequent and friendly touch. Is it not true that the great majority of misunderstandings and difficulties which arise between men are the result of the lack of contact?

"When men rub elbows, sit around the same table and discuss mutual interests, the things they have in common multiply, while their differences rapidly disappear or are adjusted. It was Charles Lamb, I think, who said, 'I cannot hate the man whom I know.'

"Obviously, personal relations among men must exist in order that the Spirit of Brotherhood may develop. They furnish the friendly soil in which the germ is nourished and grows."—John D. Rockefeller, Jr., in Brotherhood of Men and Nations.

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JOVIANS!

Can You Use Any of These Jobs?

BELOW you will find, briefly stated, the requirements of a number of positions that, at the time of our going to press, a seeking the right Jovians. It makes no difference if your application has not yet been filed with the Employment Bureau A line to The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo., will bring particulars of an of these situations you wish to investigate. In writing, please refer to positions by numbers, also by description.

---

291. Purchasing Agent. Personal correspondence solicited by Chicago electrical concern.

292. Salesmen. Four attractive territories open with large electrical specialty manufacturer.

293. Bookkeeper. Wisconsin electrical jobbing house can use a good, capable man.

294. Secretary. Attractive opening for young man with local electrical contractors' association in large Ohio city; $125 per month.

295. Bookkeeper. Attractive opportunity for man capable of handling an office force and of developing into an executive; good salary.

296. Salesman. Man wanted to sell flashlights in several Western States.

297. Electric Engineers. Large Eastern lamp manufacturer has place for several capable men.

298. Detail Man. $125 per month to office man familiar with pricing and quotations. Good chance for advancement.

299. Stockman. Ohio electrical manufacturer has need of experienced stockkeeper.

300. Salesman. Desk job for man accurate at figures and familiar with detail and correspondence; good future.

301. Linemen. Two men wanted ($85 to $100 per month) who can be advanced to foremen.

302. Chemical Engineer
Mechanical Engineer
Store Keeper
} Large steel company is in need of all these classes of employes.

303. Electrician-Lineman. $100 per month to combination man, in Kansas.

304. Shipping Clerk. Experienced man wanted on Pacific Coast; not subject to draft.

305. Wiremen. North Carolina power company can use several; $4 per day and advance as soon as proficiency shown.

306. Linemen. Oklahoma light and power concern wants men familiar with meters, transformers and outside construction work.

307. Salesmen. Three openings; Minnesota, Iowa, South Dakota and Nebraska territory; for men above draft age.

308. Salesmen. Wisconsin public service company nee men to sell gas and electric appliances for newly opene commercial department.

309. Sales Manager. Attractive opening with large Northe electrical concern; first-class man wanted.

310. Salesman. Indiana electrical supply house wants ma devoting ether entire or part time to sell desk lamp decorative fixtures, etc., on commission.

311. Salesman. Good salary to man who is acquainted wi motor trade to sell new, second-hand and rebuilt moto in large Southern city. A combination man who ca buy as well as sell is desired.

312. Salesmen. Ten specialty men wanted to sell an au device through North and West.

313. Salesmen. Large Eastern manufacturer of elect motors and welding equipment will pay $150 p month with bonus for several energetic men.

314. Purchasing Agent. Immediate opening for man expe enced in the electrical jobbing and manufacturing lin

315. Draftsman
Estimator
Foreman
} Men wanted who are familiar with elect knife switches, switchboards and pa work.

316. Salesman. Attractive opening for man of intelligen ability, and with some technical knowledge of pole l material and construction.

317. Sales Agent. Indiana fixture manufacturer has territ south of the Ohio and east of the Mississippi Riv open for good hustler.

318. Telephone Circuit Men. One of the larger universi is looking for instructors in this line for training draf men; must be exempt from draft.

319. Central Station Engineer. Kansas central power pl has opening; $100 per month.

320. Lamp Salesmen. Eastern manufacturer has sev territories open to experienced men.

321. Salesmen. Ohio publicity concern wants outdoor r

322. Salesmen. Men experienced in calling on job wanted to sell farm lighting plants.

323. Salesmen. Attractive opening with large Eastern trical manufacturer.

324. Operators. $80 to $115 per month (some positions inc house and current) in substations and motor pc generating stations; Western concern.

325. Lineman
Acetylene Welder
} Oklahoma power concern has p for such men.

326. Switchboard and Panel Man. Eastern concern has tractive opening in drafting and estimating departm

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EMPLOYERS
CAN YOU USE ANY OF THESE MEN?

Do You Need

AN EXECUTIVE, SALESMAN, SUPERINTENDENT, ENGINEER OR OTHER EMPLOYE?

WE PUBLISH below a list of more than 100 applications now on file with our Employment Bureau, giving the number under each classification and a limited statement of the specifications. Among these you will surely find the man to fill the place you have open. Let us know your requirements, and we will take pleasure in putting the applicants in touch with you promptly. Address The Jovian Order, Commercial Division, Syndicate Trust Building, St. Louis, Mo.

CLASSIFICATION	No. on File	Age	Qualifications	Experience	Salary Wanted	Location
Advertising Managers	4	23–29	H. S.-College	2–8 yrs.	$150–250	Anywhere
Bookkeepers	2	26–35	High School	5–14 yrs.	$65–100	Anywhere
Central Station Managers	4	29–38	H. S.-Univ	6–18 yrs.	$60–416	Anywhere
Clerical	4	22–28	High School	2–10 yrs.	$75–150	Anywhere
Commercial Laboratory Workers	1	29	Tech. School	11 yrs.	.....	Anywhere
Construction Engineers	3	28–46	H. S.-Univ	2–27 yrs.	$100–200	Anywhere
Electricians	1	26	H. S.-Univ	3 yrs.	$125	East
Electrical Engineers	7	30–38	Practical-Univ.	5–12 yrs.	$125–375	Anywhere
Engineers	5	28–40	Practical-Univ.	5–12 yrs.	$125–300	Anywhere
Estimators	2	35–36	Practical	16–17 yrs.	$125–160	Anywhere
Foremen	3	20–34	Practical	9–16 yrs.	$125–160	Anywhere
General Managers	3	31–38	Practical	7–15 yrs.	$250–417	Anywhere
Linemen	1	22	High School	5 yrs.	$90	Anywhere
Managers, Commercial Department	2	34–35	Practical	12 yrs.	$200–250	Anywhere
Managers, Contracting	2	26–36	College	5–16 yrs.	$125	Anywhere
Managers, Jobbing House	2	32	College	13 yrs.	$2,400-10,000	Anywhere
Managers, Office	4	29–48	High School	8–10 yrs.	$100–250	Anywhere
Managers, Plant	11	25–42	Practical-Univ.	5–20 yrs.	$100–250	Anywhere
Managers, Traffic	1	53	Practical	15 yrs.	$200	Anywhere
Manufacturers' Representatives	4	36–45	Practical-Tech.	8–10 yrs.	Com.–$200	Anywhere
New Business Managers	2	29–34	H. S.-Univ.	9–15 yrs.	$125–175	Anywhere
Office Executives	4	25–32	Grade-Univ.	4–18 yrs.	$85–225	Anywhere
Power Salesmen	1	36	Tech. Grad	12 yrs.	$200	West
Purchasing Agent	6	24–41	Grade-Tech	4–21 yrs.	$125–250	Anywhere
Sales Engineers	3	39–45	College–Univ.	9–20 yrs.	$125–200	Anywhere
Sales Managers	8	28–44	H. S.-Univ.	4–17 yrs.	$150–333	Anywhere
Salesmen	28	24–43	H. S.-Univ.	2–25 yrs.	$75–300	Anywhere
Superintendents	11	28–44	H. S.-Univ.	3–15 yrs.	$125–300	Anywhere
Telephone Engineers	1	35	H. S.-Tech.	15 yrs.	$200	Anywhere
Welder (Acetylene)	1	33	High School	5 yrs.	$150	Anywhere
Wiremen	2	23–25	High School	7–9 yrs.	$75–125	Anywhere

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STATESMEN-AT-LARGE

BISCHOFF, W. E., Po. 3190, care W. N. Matthews & Bro.....Chicago, Ill.
CARPENTER, JOHN, Po. 1320, care Corsicana Gas & Electric Co..Corsicana, Tex.
CHASE, SAMUEL A., Po. 4424, care Westinghouse Electric & Manufacturing Co.....East Pittsburgh, Pa.
CRONINGER, C. R., Po. 9624-60V, care General Electric Co.....St. Louis, Mo.
DALY, DAVID, Po. 366-V, care Houston Electric Co.....Houston, Tex.
DOWNS, B. M., Po. 2508, care Hemingway Glass Co.....Covington, Ky.
ELKAS, I., Po. 9931, care Robbins & Myers.....St. Louis, Mo.
GUARDIA, A. A., Po. 2657, 4447 Magnolia Ave.....Chicago, Ill.
HAND, WILLIAM, Po. 796, care General Electric Co.....Kansas City, Mo.
HAWKINS, R. V., Po. 11619, care Appleton Electric Company.....St. Louis, Mo.
HEAD, W. B., Po. 139-108, care Texas Power & Light Co.....Dallas, Tex.
HERSTEIN, W. R., Po. 765V, care Electric Supply Co.....Memphis, Tenn.
HICKOX, NORMAN B., Po. 7881, care National X-Ray Reflector Co., 235 West Jackson Blvd.....Chicago, Ill.
HILL, G. W., Po. 1271, 29 West Thirty-Ninth St.....New York, N.
HOLCOMBE, W. P., Po. 901V, care Builders Exchange.....Minneapolis, Min
JENNINGS, O. A., Po. 226, care Southwest General Electric Co.....Dallas, Te
LAUDERBACH, F. E., Po. 11655, 917 Pine St.....St. Louis, M
LEWIS, P. LLOYD, Po. 6018V, care Wagoner Electric Company.Kansas City, M
MARTIN, CHARLES L., Po. 176-56V, care Electric Specialty Co.....Dallas, Te
RAMIER, J. F., Po. 10604, care Memphis Cons. Gas & Electric Co. Memphis, Ten
SERVA, A. A., Po. 425, 2420 Hoagland Ave.....Ft. Wayne, In
TUTTLE, W. B., Po. 1031, care San Antonio Traction Co.....San Antonio, Te
VOGAN, W. G., Po. 15974, care Northern Electric Co.....Winnipeg, Ma
VOGEL, J. C., Po. 2254-32V, Fifty-Ninth and Woodland Ave...Philadelphia, I
WADDINGTON, E. H., Po. 5176, care Western Electric Co.....St. Louis, M
WAKEMAN, J. M., Po. 524, 29 West Thirty-Ninth St.....New York, N.
WILCOX, E. A., Po. 6830V, 1819 Eye St.....Washington, D.

JOVIAN STATESMEN

ALABAMA
MATTHEWS, H. W., Po. 4476, care Burgoon-Matthews Electric Co..Birmingham

ARIZONA, CALIFORNIA, NEVADA
SPERRY, LEWIS E., Po. 9415, care New York Insulated Wire Co...San Francisco

ARKANSAS
GRIFFITH, C. J., Po. 13901, care Little Rock Railway & Electric Co..Little Rock

CONNECTICUT
HOLMES, T. L., Po. 3046, care Western Electric Co.....West Haven

GEORGIA
COLLIER, RAWSON, Po. 4458, care Georgia Railway & Power Co.....Atlanta

IDAHO
KIERSTED, EARNEST C., Po. 10258, care Idaho Power Co.....Twin Falls

ILLINOIS
SPAKE, L. C., Po. 15397V, care Western Editor McGraw-Hill Publishing Co.....Chicago

INDIANA
LEE, WALLACE O., Po. 11440, care Indianapolis Light, Heat & Power Co.....Indianapolis

KENTUCKY
RILEY, J. B., Po. 5297, care Westinghouse Lamp Co.....Louisville

LOUISIANA
PORTEOUS, W. A., Po. 9226, care Western Union Telegraph Co.....New Orleans

MASSACHUSETTS
BURLEIGH, C. B., Po. 398, care General Electric Co.....Boston

MICHIGAN
CAVANAUGH, J. A., Po. 11199, care Benton Harbor & St. Joe Ry. Co. Benton Harbor

MINNESOTA, NORTH DAKOTA, SOUTH DAKOTA
VILETT, W. H., Po. 3675V, care Sterling Electric Co.....Minneapolis

MISSOURI
JOHNSON, FRED, Po. 177V, care Wagner Electric Manufacturing Co.....St. Louis

NEBRASKA
ZIMMAN, I. B., Po. 1411, care Omaha Electric Light & Power Co.....Omaha

NEW HAMPSHIRE
BURLEIGH, C. B., Po. 398, care General Electric.....Boston, Mass.

NEW JERSEY, DELAWARE
HOWLETT, C. A. S., Po. 279.....Elisabeth

NEW MEXICO
SHEPARD, J. A., Po. 16106, care Deming Ice & Electric Co.....Demi

NEW YORK
HINES, E. G., Po. 16222, care Electrical World, 239 West Thirty-Ninth St.....New Yo

OHIO
P. B. ZIMMERMAN, Po. 7305V, care National Electric Lamp Association, Nela Park.....Clevela

OKLAHOMA
MCCALLUM, CHARLES, Po. 3394, care Western Electric Co.....Oklahoma C

PENNSYLVANIA
CRISS, GEO. H., Po. 3364.....Pittsbur

RHODE ISLAND
DAVENPORT, E. R., Po. 8019, care Naragansett Electric Light Co....Provide

SOUTH CAROLINA
FULLER, W. W., Po. 16402, care Isle of Palms Traction Co.....Charlest

TENNESSEE
WATSON, C. J. R., Po. 2131V, care Electric Supply Co.....Memp

TEXAS
CLARK, HIRAM O., 6629, care Houston Lighting & Power Co.....Houst

UTAH
TALMADGE, CHARLES H., Po. 1431, care Western Electric Co.....Salt Lake C

VERMONT
LARRABEE, E. E., Po. 1145, care Twin States Gas & Electric Co.....Benning

VIRGINIA
SEILER, GUY E., 7479, care Virginia Railway & Power Co.....Richm

WEST VIRGINIA
POWERS, W. R., Po. 2784, care Consolidated Heat, Light & Power Co..Hunting

WISCONSIN
GOLIN, CARL, Po. 12385V, care Northwestern Storage Battery Co....Milwau

PROVINCE OF ALBERTA
RICHARDS, NORMAN S., Po. 8985, care Northern Electric Co.....Calg

PROVINCE OF MANITOBA
SCHUMACHER, J. H., Po. 1742, care Schumacher-Gray Co., Ltd.....Winni

PROVINCE OF QUEBEC
HYDE, E. N., Po. 1614, care Northern Electric & Manufacturing Co...Mont

FIRST AND SECOND TRIBUNES

ALABAMA
MATTHEWS, H. W., Po. 4476, First Tribune, care Burgoon-Matthews Electric Co.....Birmingham

ARIZONA
*HOWLAND, JOHN, Po. 18686, First Tribune, care Globe Light & Power Co...Globe

ARKANSAS
RUSH, J. C., Po. 1556V, First Tribune, care Rush Bros.....Hot Springs
(*Nicholas Lund, Po. 17257, Second Tribune)

CALIFORNIA
*FAGG, J. H., Po. 12212, First Tribune, care Pacific Gas & Electric Co. .Stockton
(*A. F. Flanagan, Po. 12213, Second Tribune)
GOULD, T. A., Po. 18057, First Tribune, care Redondo Home Telephone Co.....Redondo Beach
*LANDIS, H. G., Po. 288, First Tribune, care Landis Electric Co., 941 8th St.....San Diego
(*H. B. Steventon, Po. 14643, Second Tribune)
(Henry Mellman, Po. 9392, Second Tribune).....Oakland
*NIGHTINGALE, E. L., Po. 18072, First Tribune, care General Electric Co., 724 Spring St.....Los Angeles
(F. J. Airey, Po. 1266, Second Tribune)
*ROWE, A. E., Po. 995, First Tribune, care Telephone Electric Co..San Francisco
*(Edwin R. Brown, Po. 7715, Second Tribune)
*TOBEY, J. O., Po. 12226, First Tribune, care Pacific Gas & Electric Co. Sacramento
(*H. F. Schultz, Po. 14914, Second Tribune)

COLORADO
*BURNITE, T. B., Po. 3426V, First Tribune, Boston Bldg.....Denver
(*H. S. Sands, Po. 1708, Second Tribune)
PAUL, CLARENCE M., Po. 4942, First Tribune, care Trinidad Gas & Electric Supply Co.....Trinidad

DELAWARE
*SHELTON, H. E., Po. 14400, First Tribune, care Wilmington & Philadelphia Traction Co.....Wilmington

DISTRICT OF COLUMBIA
*CARROLL, H. R., Po. 1794, First Tribune, 714 Twelfth St.....Washington

GEORGIA
(Geo. E. Watts, Po. 12482, Second Tribune).....Atlanta

IDAHO
DOVERY, C. G., Po. 10241, First Tribune, care Idaho Power Co.....Twin F
(J. O. Blackstone, Po. 15318, Second Tribune)

ILLINOIS
BAUM, B. E., Po. 19260, First Tribune, care Vermillion County Telephone Co.....Dany
BROWN, EDWIN C., Po. 5278, First Tribune, care Galva Electric Light Co.. .Gs
(Chas. E. Broderick, Po. 1154, Second Tribune).....East St. L
GREEN, WM. A., Po. 13279, care Green Electric Co., 315 South Jefferson St..Pe
(Jas. R. Downs, Po. 13277, Second Tribune)
KETTRON, C. W., Po. 16416, First Tribune, President, Illinois Elect. Porc. Co.....Mac
(James R. Massey, Po. 8939, Second Tribune).....Springf
MORSE, CHESTER A., Po. 14611, First Tribune, care Central Public Illinois Service Co.....Matt
(Donald R. Truax, Po. 14617, Second Tribune)
*NELSON, A. L., Po. 15384, First Tribune, care Commonwealth Edison Co. Chic
(*W. H. Colman, Po. 3040V, Second Tribune)

INDIANA
HARRIS, A. B., Po. 14154, First Tribune, 570 Washington St.....C
*LOUTH, M. E., Po. 16419, First Tribune, care Globe Stove & Range Co. Koko
*VICTOR, H. R., Po. 4857, First Tribune, care Varney Electrical Supply Co., 235 South Meridian St.....Indiana

IOWA
*ABELL, C. S., Po. 3952V, First Tribune, 419 Main St.....Keo
FLACK, FRANK W., Po. 13979, First Tribune, care Iowa Ry. & Light Co.....Coon Ra
MCINNERNEY, B., Po. 1400, First Tribune, care Kimball Bros. & Co. Council B
(E. S. Damon, Po. 1398, Second Tribune)
MURPHY, J. E., Po. 15800, First Tribune, care Murphy-Dunham Co., Sioux

KANSAS
*CARR, J. E., Po. 16506, First Tribune, 446 S. 7th St.....Sa
(*M. L. Derge, Po. 9616, Second Tribune)
HUBBARD, HARVEY B., Po. 17023, First Tribune, care Hubbard Electric Co.....B
*MAGRUDER, H. W., Po. 15816, First Tribune, care Liberal Light, Ice & Power Co.....Lib
*WADSWORTH, W. A., Po. 7249, First Tribune, care Kansas Gas & Electric Company.....Wic
*WRIGHT, E. A., Po. 15827, First Tribune, care Great Bend Water & Electric Co.....Great B

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ADAMS, F. C., Po. 18315, First Tribune, proprietor, Adams Electric Co. . Sulphur
BERRY, D. EARLE, Po. 8245, First Tribune, care Ruby House . . . . . Owensboro
(C. C. Childers, Po. 15494, Second Tribune) . . . . . Louisville

LOUISIANA

JOUBERT, W. C., Po. 16467, First Tribune, 409 Main St . . . . . Baton Rouge
*LEVY, FERDINAND, Po. 6696, First Tribune, care Interstate Electric Co. . . . . New Orleans
(*T. N. Lide, Po. 3925, Second Tribune)
*SWANN, L. A., Po. 2730-100, First Tribune, care Lake Charles Railway & Light Company . . . . . Lake Charles
(*J. A. Landry, Po. 127, Second Tribune)
WILLIAMS, J. A., Po. 5053, First Tribune, care Southwest Gas & Electric Co. . . . . Shreveport
(H. E. Cahn, Po. 13025, Second Tribune)

MARYLAND

(Stanley B. Prather, Po. 1650, Second Tribune) . . . . . Baltimore

MASSACHUSETTS

(Kurt R. Sternberg, Po. 7612, Second Tribune) . . . . . Springfield

MICHIGAN

*AVIS, C. J., Po. 10086, First Tribune, care Southern Michigan Light & Power Co. . . . . Morenci
*BURCHARD, C. A., Po. 19049, First Tribune, care B. H. & St. Joe Ry. & Light Co. . . . . Benton Harbor
(*Earl Frakes, Po. 15528, Second Tribune)
*CUDAHY, J. D., Po. 16321, First Tribune, care Consumers Power Co. Kalamazoo
(*L. W. Brown, Po. 16319, Second Tribune)
LOVE, WILL, Po. 662, First Tribune, care Shelby Electric Lamp Works, 525 Fifth St. . . . . Traverse City
MCCLOY, A. S., Po. 11051, First Tribune, care Stevenson Hotel . . . . . Detroit
(*J. T. Pearson, Po. 11210, Second Tribune)
*MARBLE, CHARLES M., Po. 13961, First Tribune, 67 College St. . . . . Battle Creek
(*L. R. Greusel, Po. 10918, Second Tribune)
SCHAGANE, P. F., Po. 13871, First Tribune, 617 South Saginaw St. . . . . Flint
(L. G. Copeman, Po. 7219, Second Tribune)
*THORNE, JOHN J., Po. 14749, First Tribune, care Thorne Electric Co. . . Bay City
*(*Samuel Ball, Po. 19542, Second Tribune)
*TROMBLEY, GEORGE, Po. 14750, First Tribune, care Trombley Electric Co., 130 N. Jefferson St. . . . . Saginaw
(*A. B. Brow, Po. 14737, Second Tribune, 228 South Weadock Ave.) . . . Saginaw
WATSON, GEO. H., Po. 12848, First Tribune, care Consumers Power Co., 124 Monroe St. . . . . Grand Rapids
(R. H. Vandermass, Po. 16484, Second Tribune)

MINNESOTA

ANDERSON, EMIL, Po. 7805, First Tribune, 239 Plymouth Building. Minneapolis
(*Paul Joyslin, Po. 1254, Second Tribune)
GRIMES, W. A., Po. 761, First Tribune, care Northern Electric Co. . . . . Duluth
(*F. A. Johnson, Po. 8192, Second Tribune)

MISSISSIPPI

*BRANDLI, H. E., 15617, First Tribune, care Meridian Light & Power Co. . . . . Meridian
(*Chas. M. Rogers, Po. 14485, Second Tribune)
GORENFLO, W. F., Po. 3342, First Tribune, care Gulfport & Mississippi Coast Traction Co. . . . . Gulfport
*MCANGE, W. N., Po. 16854, First Tribune, care Southern Telephone & Telegraph Co., Telephone Building . . . . . Corinth
NEWBILL, HOMER J., Po. 16855, First Tribune, Box 413 . . . . . Tupelo

MISSOURI

*BARBER, A. D., Po. 1850, First Tribune, care Western Electric Co. . Kansas City
*BARNARD, C. C., Po. 10866, First Tribune, care Missouri Gas & Electric Service Co. . . . . Marshall
(G. E. Michel, Po. 9061, Second Tribune) . . . . . St. Louis
FOX, CHAS. D., Po. 18163V, First Tribune, care City Light Plant . . . . . St. Joseph
(S. W. Beale, Po. 6840, Second Tribune)
(A. M. Grall, Po. 4112, Second Tribune) . . . . . Joplin
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St. Louis	"	No. 20
Southwestern Michigan Jovian League (Benton Harbor, Michigan.)	"	No. 21
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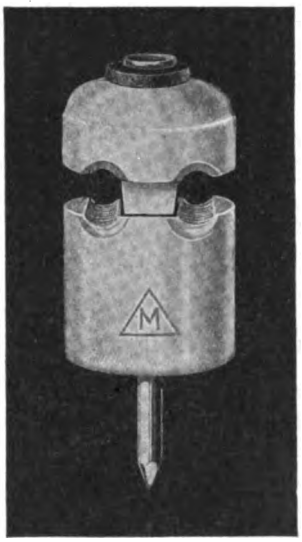

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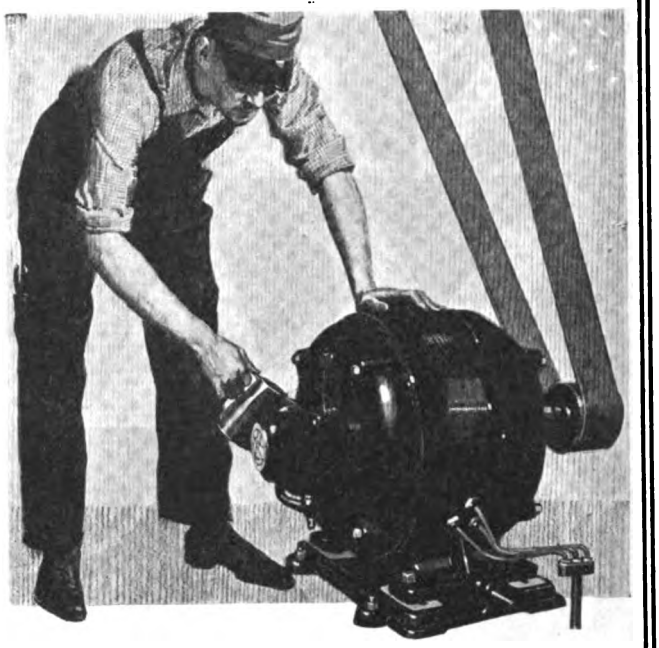

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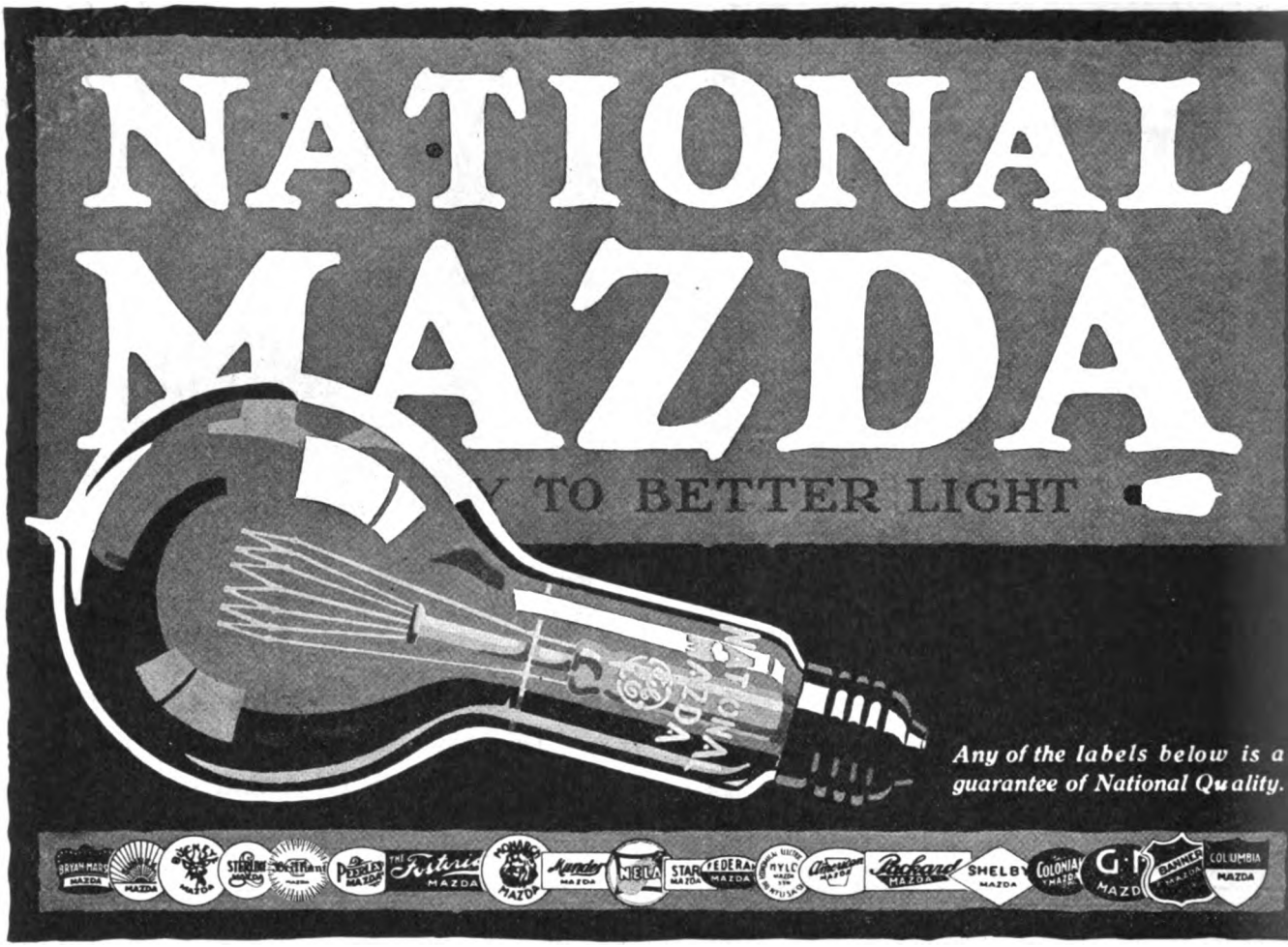

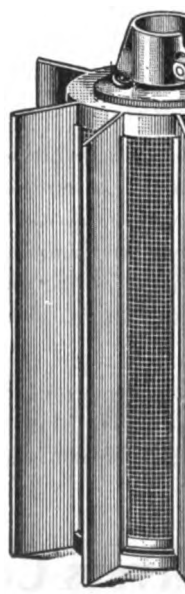

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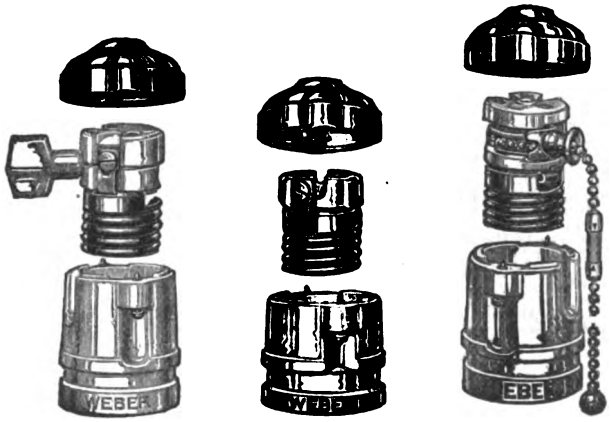

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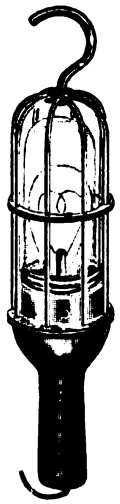

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Is just what its name describes, and is designed to meet the requirements of the garage, or wherever gases or inflammable materials may be used. A heavy steel frame, strong handle, handy grip hook, and **Vapor Proof** receptacle make this the best **Vapor Proof** lamp guard on the market. *Takes a 25-watt Standard Mazda Lamp.*

WE ALL KNOW

that the use of gasoline and other inflammable substances around the garage and automobile entails the danger of fire and explosions. Such accidents can be prevented by the installation of a ***"Safety" Vapor Proof Portable Lamp Guard.***

"SAFETY FIRST"

McGill Manufacturing Company

3 Oak Street Valparaiso, Ind.

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Where to get G-E Service

This page is prepared for the ready reference of the readers of the *Jovian Bulletin*. To insure correspondence against avoidable delay, all communications should be addressed to the G-E sales office, G-E distributing jobber, or G-E foreign representative nearest the writer.

OFFICES AND DISTRIBUTORS IN THE UNITED STATES

LOCATION	G-E DISTRICT OR SALES OFFICE	G-E DISTRIBUTING JOBBER
Alabama, Birmingham	Brown-Marx Bldg.	Matthews Elec. Supply Co.
California, Los Angeles†	724 S. Spring. St.	Pacific States Electric Co.
California, Oakland		Pacific States Electric Co.
California, San Francisco†§	Rialto Building	Pacific States Electric Co.
Colorado, Denver†	First Nat'l Bank Bldg.	The Hendrie & Bolthoff Mfg. & Sup. Co.
Connecticut, Hartford	Hartford Nat'l Bank Bldg.	
Connecticut, New Haven	Second Nat'l Bank Bldg.	
Connecticut, Waterbury		New England Eng. Co.
District of Columbia, Washington	Evans Building	National Elec'l Supply Co.
Florida, Jacksonville	Heard Nat'l Bank Bldg.	Florida Elec. Supply Co.
Georgia, Atlanta†§	Third Nat'l Bank Bldg.	Carter Electric Company
Illinois, Chicago†§	Monadnock Building	Central Electric Company Commonwealth-Edison Co.
Indiana, Fort Wayne	Ft. Wayne Elec. Works	
Indiana, Indianapolis	Traction Terminal Bldg.	Indianapolis Elec. Sup. Co.
Iowa, Des Moines	Hippee Building	Mid-West Electric Co.
Kentucky, Louisville	Starks Building	Belknap Hardware & Manufacturing Co. Inc.
Louisiana, New Orleans†	Maison-Blanche Bldg.	Woodward, Wight & Co. Ltd.
Maryland, Baltimore	Lexington St. Bldg.	Southern Electric Co.
Massachusetts, Boston§	84 State St.	Pettingell-Andrews Co.
Massachusetts, Springfield	Mass. Mutual Bldg.	
Michigan, Detroit	Dime Savings Bank Bldg.	Frank C. Teal Company
Minnesota, Duluth	Fidelity Building	Northwestern Electric Equipment Company
Minnesota, Minneapolis†	410 Third Ave., No.	Peerless Electrical Co.
Minnesota, St. Paul		Northwestern Elec. Equip. Co.
Missouri, Joplin†	Miners' Bank Bldg.	
Missouri, Kansas City†	Dwight Building	The B-R Electric Co.
Missouri, St. Louis†	Pierce Building	Wesco Supply Company
Montana, Butte	Electric Building	
Nebraska, Omaha	Electric Building	Mid-West Electric Co.
New Jersey, Newark		Tri-City Electric Co. Inc.
New York, Albany		Havens Electric Co., Inc.
New York, Buffalo	10th Floor, Elec. Bldg.	Robertson-Cataract Elec. Co.
New York, Elmira	Hulett Building	
New York City	Equitable Bldg., 120 Broadway	E. B. Latham & Company Royal Eastern Elec'l Sup. Co. Sibley-Pitman Elec. Corp.
New York, Niagara Falls	Gluck Building	
New York, Rochester	Granite Building	Wheeler-Green Elec'l Sup. Co.
New York, Schenectady	G-E Works	
New York, Syracuse	Onondaga County Savings Bank Bldg.	Mohawk Elec'l Sup. Co.
North Carolina, Charlotte	Comm. Nat'l Bank Bldg.	
Ohio, Cincinnati†	Provident Bank Bldg.	The F. D. Lawrence Elec. Co.
Ohio, Cleveland	Illuminating Bldg.	Republic Electric Co.
Ohio, Columbus	The Hartman Bldg.	The Erner & Hopkins Co.
Ohio, Dayton	Schwind Building	The Wm. Hall Electric Co.
Ohio, Toledo	Spitzer Building	W. G. Nagel Electric Co.
Ohio, Youngstown	Stambaugh Bldg.	
Oklahoma, Oklahoma City	*Terminal Bldg.	
Oregon, Portland†	Elec. Building	Pacific States Electric Co.
Pennsylvania, Erie	Commerce Bldg.	
Penn. Philadelphia†§	Witherspoon Bldg.	Philadelphia Electric Company Supply Department
Pennsylvania, Pittsburgh†	Oliver Bldg.	Union Electric Company
Rhode Island, Providence	1012 Turks Head Bldg.	
South Carolina, Columbia		Perry-Mann Elec. Co. Inc.
Tennessee, Chattanooga	James Bldg.	James Supply Company
Tennessee, Knoxville	Burwell Building	
Tennessee, Memphis	Randolph Building	Electric Supply Company
Tennessee, Nashville	Stahlman Building	
Texas, Dallas†	*Interurban Building	
Texas, El Paso†	*500 San Francisco St.	
Texas, Houston†	*Third & Wash. Sts.	
Utah, Salt Lake City†	Newhouse Building	Capital Electric Company
Virginia, Richmond	Va. Rwy. & Pr. Bldg.	
Washington, Seattle†	Colman Building	Pacific States Electric Co.
Washington, Spokane	Paulsen Building	Pacific States Electric Co.
West Virginia, Charleston	Charleston National Bank Building	
Wisconsin, Milwaukee	Public Service Bldg.	

*Southwest General Electric Company. †Warehouse. §Repair shop.

FOREIGN OFFICES AND REPRESENTATIVES

GENERAL FOREIGN SALES OFFICES—SCHENECTADY, N. Y.—120 BROADWAY, N. Y. CITY—83 CANNON ST., LONDON, E.C., ENGLAND

LOCATION	G-E FOREIGN OFFICE OR COMPANY	G-E FOREIGN REPRESENTATIVE
Argentina, Buenos Aires	Cia General Electric Sudamericana, Inc.	
Australia, Sydney and Melbourne	Australian Gen. Elec. Co.	
Brazil, Rio de Janeiro	Companhia Gen. Electric do Brazil	
Central America, New York, U. S. A.		G. Amsinck & Company
Chile, Santiago, Iquique and Antofagasta		International Machinery Co.
China, Shanghai	American General Electric Edison Corp. of China	Anderson, Meyer & Co. Ltd.
Colombia, S.A., Barranquilla		Wesselhoeft & Wisner
Cuba, Havana		Zaldo & Martinez
Dutch E. Indies, Soerabaya, Java	Gen. Elec. Co. (of N. Y.)	
England, London	Gen. Elec. Co. (of N. Y.)	
India, Calcutta	Gen. Elec. Co. (of N. Y.)	
Japan and Korea, Tokio	Yokohama General Electric Co.	Mitsui Bussan Kaisha, Ltd. Bagnall & Hilles
Mexico, Mexico City	Mexican Gen. Elec. Co.	
New Zealand, Wellington, Christchurch, Dunedin and Auckland		The Nat. Elect'l and Eng. Co.
Peru, Lima		W. R. Grace & Company
Philippine Islands, Manila		Pacific Commercial Company
South Africa, Johannesburg, Capetown and Durban	South African General Electric Company	

For business in Great Britain address British Thomson-Houston Co., Ltd., Rugby, Eng. For Hawaiian business address Catton, Neill & Company, Ltd., Honolulu
For Canadian business address Canadian General Electric Company, Ltd., Toronto, Ont.

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GENERAL ELECTRIC COMPANY

GENERAL OFFICE: SCHENECTADY, N.Y.

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